

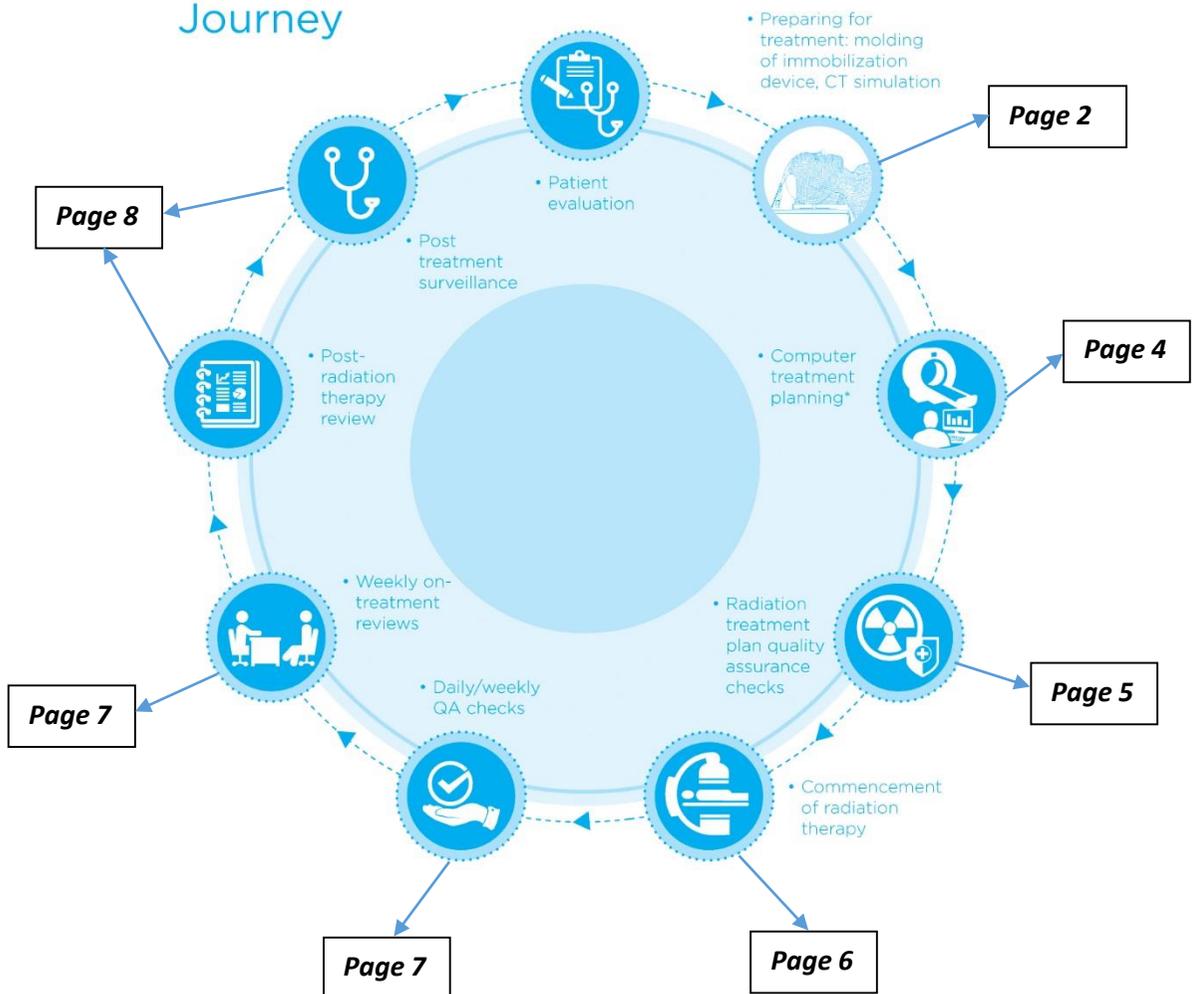
Your Radiotherapy Booklet

Dear Patient,

This is an information booklet designed to help you understand your radiation treatment. Please feel free to approach any member of our highly experienced team at any point should you have any queries not answered in this booklet.

AARO Radiation Therapy Care Pathway

The Radiotherapy Journey



Fabrication of immobilization devices

The immobilization device secures you in a stable position for accurate treatment delivery. There are a few options available and your team will select the most appropriate device for your treatment region and position.

Immobilization cushions – generally used for the thorax and abdomen region, along with other select regions

Immobilization cushions are similar to giant bean bags. The therapists would feel for some bony landmarks on your body and adjust your position after you lie down on the cushion. After your position is confirmed, air would be sucked out of the cushion and it will harden around your body shape. Your position would then be preserved by the cushion and it would be used for your daily treatment.



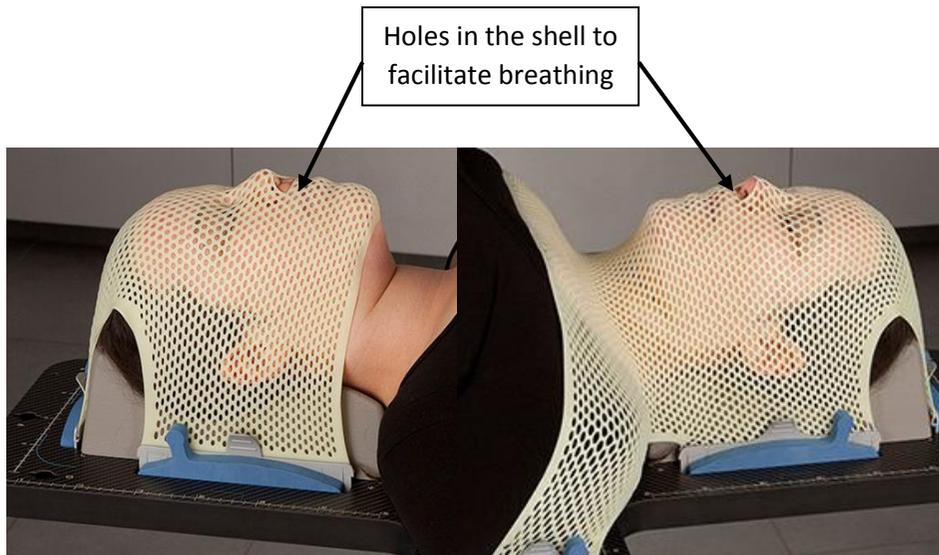
Immobilization cushions (<http://www.civco.com/ro/products/Vac-Lok-Positioning-Cushions.htm>)

Dos

- ✓ Breathe normally, remain relaxed, and keep still.
- ✓ Remove your necklace and any valuables in your pockets prior to the procedure.
- ✓ Inform your therapists by raising your hand should you feel uncomfortable anytime during the procedure.
- ✓ Monitor your weight weekly as drastic weight loss will result in a loose cushion, increasing inaccuracy in your treatment.

Immobilization shell – generally used for the head and neck region

The shell will be moulded to your facial features like your nose bridge, chin and neck. A piece of warm material will be placed over your face and gentle pressure will be applied to capture your unique facial shape. The therapists will then wait for the shell to cool completely before removing the shell. This individualised shell would be used for your daily treatment.



The immobilization shell (<http://www.orfit.com/en/brain-head-neck/>)

Dos

- ✓ Breathe normally, remain relaxed, and keep still.
- ✓ Remove your dentures, earrings and necklace prior to the procedure.
- ✓ Inform your therapists by raising your hand should you feel uncomfortable anytime during the procedure.
- ✓ Monitor your weight weekly as drastic weight loss will result in a loose shell, increasing inaccuracy in your treatment.

Don'ts

- ✗ Shave your head after the shell procedure until after the entire treatment is completed. Slight trimming is allowed. This is because drastic changes in your hair volume will affect the shell.

Support cushions

Support cushions serve to improve your comfort by supporting areas of your body which are not treated. These include head and leg support cushions. They will also be used for your daily treatment in maintaining your treatment position.

Computer Tomography (CT) Simulation

CT Simulation is a scan which gathers information about your internal anatomy for radiation therapy treatment planning. The therapists will adjust your body position to determine the best treatment position for you. The therapists will then leave the room and the scan will begin. You will feel the bed moving in and out of the CT Simulator and hear whirring noises from the machine.

After the CT Simulation, 3 - 4 small full-stop size tattoos will be made on your body to help the therapists achieve the exact treatment position every day. There will be slight discomfort as the tattoos are made with a small needle.



The CT Simulation scanner (<http://www.ctmedicalscanners.com/ge-ct-scanners/ge-lightspeed-rt-16-ct-scanner/>)

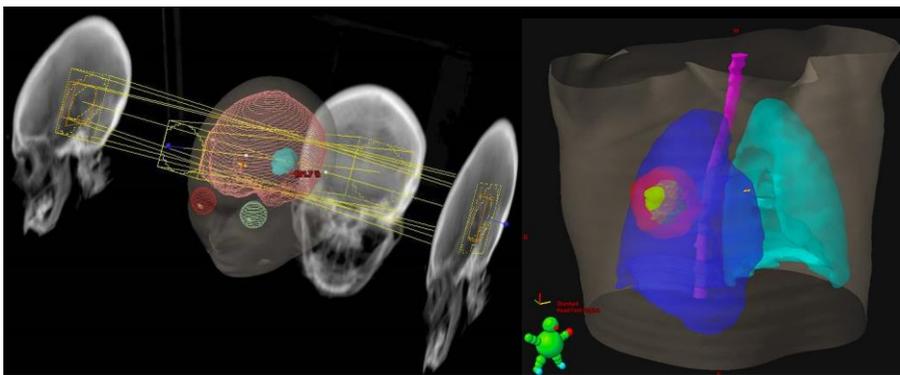
Dos

- ✓ Breathe normally, remain relaxed, and keep still.
- ✓ Inform your therapists by raising your hand should you feel uncomfortable anytime during the procedure.

Computer Treatment Planning

Next, the dosimetrist and the Radiation Oncologist will use the scans obtained from at CT Simulation to determine the best Radiation Therapy treatment plan. The aim is to maximize radiation dose delivered to the target while minimizing dose received by the surrounding normal tissues.

Radiation dose and fraction prescription, along with beam placement and dose distribution optimization would be done at this stage. The Radiation Oncologist will then assess and approve the best plan for treatment.



Treatment planning process (http://www.aboutcancer.com/brain_side_effects.htm)

Radiation Treatment Plan QA checks

Before the actual treatment plan commences, the plan would go through a multitude of independent checks by different members of the plan to ensure safe, precise and accurate plan delivery.

The finalised plan would then be electronically transferred to the radiation therapy machines, ready for delivery.

Radiation Therapy treatment

After the completion of the radiation treatment plan and safety checks, you would return for Radiation Therapy treatment. You will lie down on the treatment bed and the therapists will adjust your treatment position according to the small tattoos. The therapists will then leave the room and the treatment begin.

You will hear buzzing noises by the machine and the treatment will be between 20 to 40 minutes, depending on the complexity of the treatment plan. You **would not** feel any heat or pain from the procedure.



Radiation Therapy treatment machine

(<https://www.varian.com/oncology/products/treatment-delivery/clinac-ix>)

Dos

- ✓ Breathe normally, remain relaxed, and keep still.
- ✓ Inform your therapists by raising your hand should you feel uncomfortable anytime during the procedure.

Daily/weekly QA checks

While you are undergoing your radiation treatment regimen, the experienced team of therapists and Radiation Oncologist will conduct daily and weekly QA checks on your treatment.

This is to ensure that accurate, safe and precise treatment is delivered continuously throughout your whole course of treatment.

Weekly on-treatment review

During the course of your treatment, your Radiation Oncologist will see you weekly to ensure that you are coping well with treatment or to manage any side effects which you may experience.



Dos

- ✓ Ask the Radiation Oncologist or therapists if you have any questions regarding the treatment or side effects.
- ✓ Bring along all medication which you are currently taking (with packaging intact) during consultations with your Radiation Oncologist. This is for the doctor to assess the medication and dosage suitable for your most current condition.

Side Effects and Management

There may be some side effects associated with Radiation Therapy treatment. These side effects are not permanent and can be managed with medication or creams provided by the Radiation Oncologist.

General Side Effects include:

- Tiredness
- Nausea
- Vomiting
- Skin within the treatment area: Dryness, redness and itchiness similar to a sunburn. There may be skin loss with weeping crusting or infection in some cases.
- Hair loss within the treatment area

Specific side effects pertaining to your treatment area and their management will be discussed in detail by your Radiation Oncologist.

Post Radiation Therapy review and surveillance

Following completion of treatment, you would be free to return to your schedule as before. Appointments would be made for you to return for follow-up consultations and diagnostic scans to monitor your progress.



Useful Links for additional information

The following links provide additional useful information regarding cancer and its treatment. As each patient's treatment is individualised, please consult your Radiation Oncologist or Radiation Therapist if you have any questions pertaining to the information obtained from these links.

- ✓ National Comprehensive Cancer Network (www.nccn.org)
- ✓ UpToDate Subscriptions for Patients and Caregivers
(www.uptodate.com/home/uptodate-subscription-options-patients)
- ✓ Macmillan Cancer Support (www.macmillan.org.uk)