

## RADIOTHERAPY TREATMENT PLANNING PROCESS

Radiation oncologist and the radiation therapy team carefully plan the treatment in a process called radiation simulation which usually involves positioning your body, making marks on your skin and taking imaging. They plan the appropriate external beam radiotherapy or brachytherapy radiation treatment.



1. Consent will be taken post explanation on Benefits and Risks of the Treatment.
2. The planning CT would be acquired the very same day or a CT simulation appointment would be fixed.
3. Depending on the region to be treated, the planning CT would be a plain scan or one with contrast. ( For contrast – 3 hrs fasting)
4. Please inform the attending staff in case you are pregnant.
5. Your bladder needs to be full for the scan, you will be instructed to void and then take 2 cups of water (500 ml) 45 min before the CT scan is acquired.
6. Once you enter the CT simulation room, the nursing team will assist in securing an IV line and explain the side-effects.
7. As per the site of treatment, the immobilisation instructions will be explained to you accordingly.
8. Certain supporting devices (immobilisation devices) may be used to ensure the proper positioning, before acquiring the CT scan.
9. Some markings will be done on your body, which will either be made permanent (with a small needle and some ink) or a plaster may be taped over these marks and you will be asked to retain them until you complete your treatment.
10. Head and neck cancer and patients with brain tumour would undergo thermoplastic cast preparation before which is a plastic material which melts at warm water temperature and become soft and would be placed on the patients face or head and kept in position for 15 to 20 minutes till it dries up and becomes harder keeping the patient's position still.
11. After positioning, a CT scan would be acquired with or without contrast based on the clinical site and indication.
12. While administering the contrast through the IV line, you may feel slightly warm which is normal.
13. The entire CT procedure will take around 30-60 min. It is important that you remain very still during the scan.
14. After completion of the CT scan, treating doctor would mark out the areas which needs to be treated on the CT scan using computer and calculate the doses. Calculation of the doses and approving the plan for execution of the treatment generally takes one to 2 days or more based on the complexity of the case.
15. Appointment date and time will be discussed by the treating staff, following which the whole process is complete.
16. On the 1st day of radiation treatment, an appointment card would be handed over to the patient, which the patient is expected to carry every day and deposit at the OP counter daily at the given time.
17. For thorax & abdomen region, contrast CT scan followed by 4DCT would be acquired (if needed), for breast region a plain CT scan will be done. For Pelvis region contrast CT scan will be acquired with a water protocol.
18. You must drink at least 2 to 3 litres of water in the course of the day, which is essential to flush out the remaining radioactive medicine in the body.
19. Stay away from pregnant women and children for 24 hours, to avoid radioactive exposure.
20. Lactating mothers must express some milk and dispose it as it will be radioactive, you can feed 24 hours post procedure.