Department of Radiation Oncology
Kidwai Memorial Institute of Oncology

If you haven’t had radiotherapy before you may be feeling very anxious and have many questions. The aim of this booklet is to ease some of your fears by explaining the treatment and answering some of your questions. This booklet is not meant to replace a talk with the staff, who will always be willing to give you time, but it is hoped this will be useful as a guide, not only for yourself but also members of your family.

In the back of the booklet you will find a page to write down any questions you may like to ask us. There is also space to write down the medications you are taking. Please ask us if you need help with any help with this.

INTRODUCTION TO RADIOTHERAPY
Radiotherapy is the controlled targeting of radiation (X-ray beams of energy) at cancer cells. The purpose of radiotherapy is to destroy the cancer cells whilst protecting as much normal tissue as possible. A beam of radiation has no means of knowing the difference between the two and therefore some healthy tissue will be affected. However, normal healthy cells can repair themselves whereas cancer cells do not.
It is important for you to remember that you are an individual and that we will treat you as such. No two people are identical and the treatment will be tailor made for you.

Before any treatment can be given, it has to be planned, calculated and double-checked. Most patients will have an appointment on the Simulator first. It enables us to plan the exact area for treatment. Your consultant Doctor or registrar will be present at this session and will prescribe the treatment you are to have. Most often the Radical Radiotherapy treatment will be planned for 4 to 7 weeks duration and Palliative treatment for 1-2 weeks and some times single day depending on the indication and the patients predicted outcome by your doctor.

You may have to attend the Simulator session more than once. It may be possible for you to be treated soon after the simulator session or you will be given an appointment or for CLINAC patients phoned at home after the plan is ready.

Patients desirous of Specialized Radiation Therapy Treatments like 3DCRT (3 Dimensional Conformal Radiation Therapy), IMRT (Intensity Modulated Radiation Therapy), HRD Brachytherapy, Radiation Sensitizers, Radiation Protectors may avail such Customised treatment in Consultation with your Doctor.

Please note all these specialized treatment require additional care and time from our limited staff taking care of the huge patient load at KMIO, Hence the patients have to
co-operate and patiently undergo the necessary immobilization, mould room techniques, Virtual CT – Simulation, followed by Contouring by the doctors and Treatment planning & simulation, Plan optimization, Quality Assurance Checks, Plan approval and setup verification and Actual treatment Delivery.

**What is Radiotherapy?**

**Planning Your Treatment:**
Planning treatment may take 2-3 weeks, try not to worry, the ultimate aim is to give you the best treatment. It will not affect your illness or the outcome.

Marks will be placed on your skin with a pen or ink or immobilization devices. Do not wipe off the Marks or remove the stickers. Don’t worry if these fade as they will be regularly remarked by the doctors during your weekly OPD consultation between 9-10 am. It is often necessary for us to make a very small permanent mark on the skin, a tattoo, which is used as a reference mark for your treatment. You can refuse to have this done.

**Your Treatment**
Once the planning stage is completed you will start treatment around the appointment date and time.

During your treatment the radiographers will ask you to keep still in a certain position until the treatment is finished but you can breathe normally. The staff have to leave
the room whilst they switch on the machine. This will only be for a short while and the whole time you will be closely watched via closed-circuit television. We can also hear you and talk to you through an intercom system. If necessary, the machine can be stopped and restarted at any time.

The treatment is painless and similar to having an x-ray taken but it takes a little longer. During your treatment you will not be radioactive so no member of your family or friends are at any risk. The radiographers only leave the room because they are working all day with radiation.

The time you are in the treatment room depends on your specific treatment and may range from a few minutes to half an hour. For most people it is about ten minutes.

How many times you have to come for treatment is again individual to you. It is commonly 5 days a week from Monday to Friday. It may be once a week, may be three times a week or it may be every day for six weeks as planned by your doctor. Treatment is from Monday to Friday with usually no treatment at the weekend or on specific holidays.

If you are being treated as an outpatient you will be given appointments for your whole course of treatment. If you have problems travelling each day for treatment,
please let the staff or the SWO, receptionist know as we can help sort these problems out by provisions in Dharmashala in KMIO campus.

During your radiotherapy treatment you may be asked to have other routine tests – such as a blood test, urine sample or chest x-ray. You will also be reviewed by a doctor on Respective Units OPD days once a week, to see how you are. If you have any problems or if you need a repeat prescription, please let them know. We are all here to help you if we can.

Some times to Increase the effectiveness of Radiotherapy your doctor may add radiation sensitizer Chemotherapy and some times your doctor may prescribe Radiation Protectors to protect specific normal tissues in the body.

**Are there any side-effects?**
The side-effects of radiotherapy will vary from person to person and will depend on the area of your body that is being treated. We will tell you what side-effects to expect and the best way to deal with them.

Carry on with a normal daily life as much as you are able. There is no need to avoid being with other people during your treatment. There is also no need for special dishes or cutlery. Your body will not contain a radioactive substance, so you are not a danger
to others, even in intimate contact. The following are some of the more common reactions to treatment. Some people can be more sensitive to radiotherapy than others.

There are specific leaflets which explain, in more detail, problems related to certain areas of the body. Please ask the Consultant Doctor for the same.

**The skin**

During a course of treatment your skin may become darkened, red and sore. The best way to help prevent sore skin is to be very careful with that area by not rubbing the treatment area, washing gently is permitted in consultation with your doctor - with warm water and un-perfumed (e.g. Simple) soap, No deodorants, perfumes, creams or cosmetics in that area (unless prescribed) and wear loose fitting cotton clothes. Most people being treated with modern radiotherapy do not find this a problem unless we are treating an area that is particularly sensitive.

If you do feel or are being sick, please inform the staff. **Do not suffer in silence**, there are medications we can give you to help with this.

**Nausea and sickness**

Another handy tip is to make sure you drink plenty of fluids – make sure you have two or three drinks when normally you would only have one. Try and drink at least two to three liters of fluid a day.
**Tiredness**

During radiotherapy some people are able to work, keep house and enjoy leisure activities as usual whilst they are having treatment. Others feel unusually tired during and after treatment and find that they need more rest and, therefore, cannot do as much. Feelings of weariness and weakness will gradually go away after treatment has finished.

Pursue the normal activities that you want to and can keep up with. Remember to rest when you begin to tire.

If you do feel unusually tired, limit your activities and use your leisure time in a restful way. Do not feel that you have to do all the things you did before. Try to get more sleep at night and take naps during the day, if you can.

**Hair Loss**

A common concern about radiotherapy is hair loss. With radiotherapy you will only lose your hair in the area being treated and this is usually temporary.

**Your emotions**

The need for radiotherapy and its effects on your life can arouse a range of feelings; fear, anxiety and depression are common to many people with cancer.
When you start radiotherapy your life style may change, you may have to adjust your routine to fit treatment plans and your overall health may suffer from treatment side-effects. These kinds of changes are not so pleasant but it is important to remember you are not alone and most people have successfully dealt with similar feelings and problems.

During your treatment you may wonder what is happening to you, whether the treatment is working and how you can deal with your stress and anxiety. If you don’t understand what is happening to you, ask us, and if you don’t understand the way it is explained, keep asking until you do.

Be aware of your emotional well-being also and remember that it is as important as your physical health. If you feel frightened or discouraged, talk to us.

Everyone needs some support during difficult times and you should not hesitate to ask for help during or after your treatment.
GENERAL ADVICE

Diet
During your treatment you should try to eat as well as you can. Try to eat a variety of different foods to get a balanced diet. Ask you Dietician for the leaflet ‘Helping Yourself to a Balanced Diet during Radiation Therapy’ if you would like to know more about choosing the best foods to eat.

It is important to try not to lose weight during your treatment – you need to keep your strength up! Try to eat regular meals or snacks and make sure that you have plenty to drink. If you cannot face a meal have a nourishing drink instead. Either make your own milky drinks or milkshakes or buy meal replacement drinks from a chemist or large supermarket.

Occasionally you may find that you need to change the way you eat during your treatment. This depends on which part of your body is being treated and any changes you need to make will be explained to you. If you have any problems with eating, please ask to see our dietician, who will suggest ways to cope and how you can get the nourishment you need.

Sexual relationships
Radiotherapy and the disease itself can affect sexual relationships. Some people may be unaffected by the treatment whilst others have changes in levels of desire, changes
in tolerance for physical activity and levels of fatigue. Anxiety and stress can also have an effect on sexual relationships.

Often people find that sexual activity is not important during treatment. However, once treatment is over and normal life resumes, couples often find that it is during this time that they need support, advice and information about resuming sexual activity. Sexual feelings should return following treatment although time and changes and experiences you have been through. These are very natural feelings and it is important to talk them through with your partner.

Feel free to talk with your doctor and nurse, any matters relating to your sexual relations. If they cannot answer your questions they will be able to refer you to a counsellor Clinical Psychologist or other health professionals who can help.

**Fertility**
If you wish to discuss whether treatment may affect your fertility, please ask to speak to a specialist doctor.

**Work**
If you have a full-time job and want to stay with it, by all means try to do so. However, attending for daily treatments can make work more tiring. Rest is important, so listen to your body and do as you feel able.
Attending for treatment can also be time consuming. Please talk to the Doctor if you have problems. Some people prefer to take a few weeks off from work while having radiotherapy. Others work a reduced number of hours. You may wish to speak frankly with your employer about your needs and wishes during this time.

**Finances**

Illness and treatment can put considerable strain on your finances either due to long periods off work or increased spending on travel to treatment appointments.

If you need help or advice with finances there may be grants or benefits like CM / PM Funds available depending on your need and circumstances. There are people available to help. Please ask a ASWO / SWO / Helping Hand if you would like to speak to someone.

**Holidays**

Weekly rest from radiotherapy on Saturdays and Sundays are meant for patients normal tissue to recover and also to allow quality assurance checks on the machines for your safety and quality treatment. Avoid long breaks form Radiotherapy due to radiation Side effects whish occur during treatment in most patients and these side
effects can be medicated and they subside with in 1 to 2 weeks after stopping radiotherapy. In order to have good cancer cell kill it is advisable to take your planned treatment continuously without large interruption.

Holidays are important. If you have made plans you will need to let us know so that we can try to arrange treatment around them if it is possible. If you wish to make plans, please discuss them with your doctor.

It is important to let the travel agent know of your medical condition for Flight / Railway permission, This will enable you to obtain a concessions / refund more easily and should not add to the cost. If you do experience difficulties, please let ASWO know.

**What happens when my treatment is finished?**

At the end of your course of treatment the radiography staff will talk to you and explain how to continue caring for your skin etc. You will also be given an appointment on a *Green card* – a follow up to see your hospital doctor. Again, the span of time you have to wait will depend upon a number of factors and your condition but it is usually between three to six weeks, Some people feel isolated and alone during this time.
If you are worried about anything please feel free to contact our **Radiotherapy Aftercare- Nursing Staff / ASWO / Clinical Psychologist or your Doctor.**

We hope this leaflet has answered some of your questions. We are aware that you are an individual with your own concerns or problems. Please remember that staff are always there to help and will always be willing to talk with you in more detail about anything. Do not feel concerned that staff appear to be too busy. **We are here to care for you.**

And finally, no-one is pleased to be treated in this department but we hope your visit will be as pleasant as possible.

**Doctors & Staff**  
**Department of Radiation Oncology**  
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CLINAC: VARIAN DHX – DUAL ENERGY LINEAR ACCELERATOR

3 DCRT – 3D Conformal Radiation Therapy
IMRT – Intensity Modulated Radiation Therapy
CLINAC: 3 DCRT / IMRT
Treatment Planning & Setup
Virtual Simulation
Quality Assurance
Telecobalt: 2 D planning
Treatment, Planning & Setup
HDR Brachytherapy: 3D planning ABACUS/BRACHY VISION
LDR Brachytherapy - MAL
Superficial X-ray Machine: 100 Kv