

EDUCATIONAL BOOKLET FOR RADIATION THERAPY PATIENTS TO GUARANTEE COMPLETENESS OF TREATMENT

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Hello, don't be afraid of radiation therapy. I'll explain it all to you!

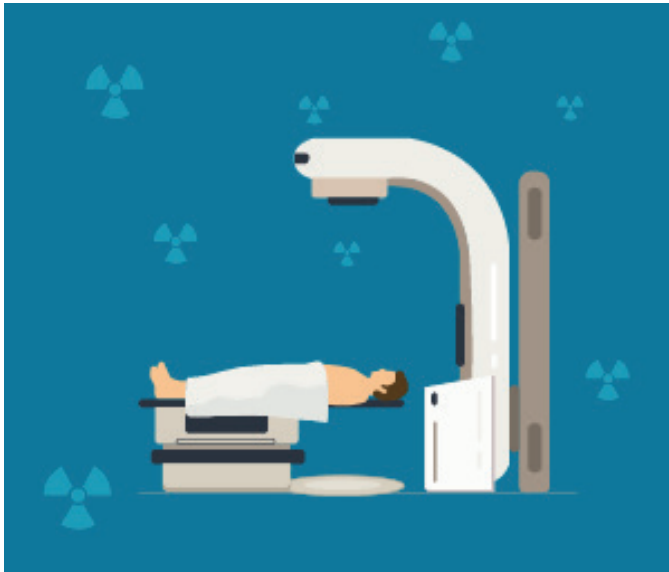


It's normal to be afraid and doubtful, but I'll help you.

Step 1

What is radiation?

Radiation is a form of energy that during therapy is used in greater quantity and intensity in order to treat cancer.



The radiation is produced by a machine named Linear Accelerator. There are many different models, but they all have the same goal, to treat cancer.

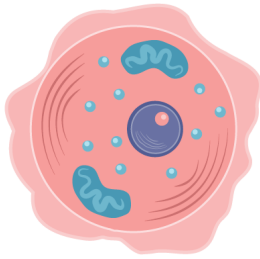


It's a pretty big machine, but don't be alarmed by its size. She will open and will spin around you and make some noises, but it never touches you. It's safe!

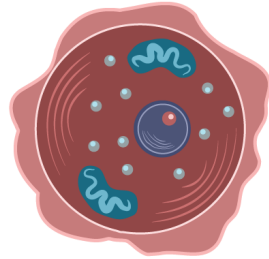
Step 2

What radiation do?

The radiation therapy machine emit the radiation aimed directly to the cancer cells with the goal of destroying them and sparing healthy cells in your body.



HEALTHY CELL



CANCER CELL

Uh, but isn't radiation bad for health?



Yes, if used incorrectly. When radiation is used in the right way, well planned, and focused directly only on the parts that are affected by the disease, then it will act as a benefit, being good to destroy our greatest enemy, the cancer.

Step 3

What is radiation therapy?

Radiation therapy is a treatment used to fight cancer through high doses of radiation with the ability to destroy affected cells, reducing the size of the tumor. It can also be used to control or stop bleeding and treat skin problems, such as keloids.

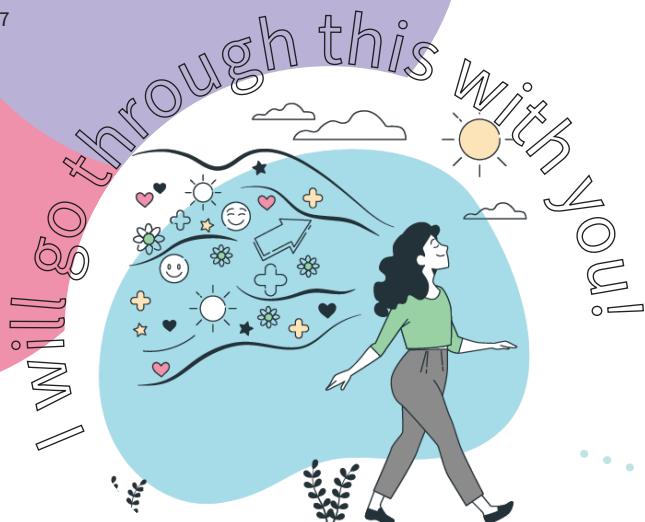
Step 4

What is the routine for those who undergo radiation therapy treatment?

Some treatments may vary in the number of days of fractions, which can be a single dose, five fractions, twenty fractions, or up to a maximum of forty fractions. This varies according to medical necessity based on what is best for each case.

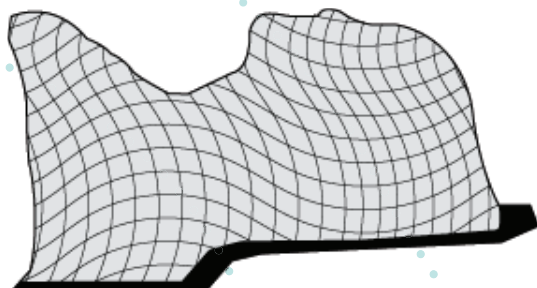


You as a patient play a key role through observation and collaboration so you can make the most of treatment and contribute to success.



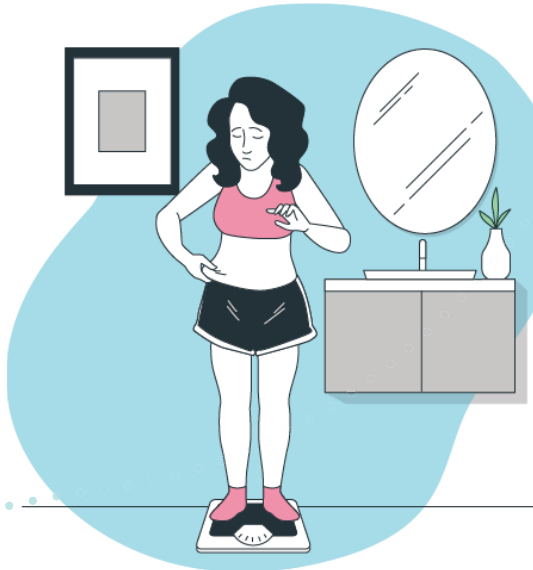
1. Arrive on time for all treatment sessions.
2. Doubts and concerns are common at all times. Feel free to ask the staff questions.
3. Inform the staff whenever you feel unwell, in pain, or if you notice changes in your bowel movements and diet.
4. Taking care of yourself is very important, so always strictly follow the medical instructions and maintain basic care for your skin and body by drinking lots of water and eating healthy.
5. Before starting your treatment you will be sent to do a simulation in a machine called computed tomography. This machine also has an opening, so keep calm, the staff will always be close to you.
6. This simulation is very important because the doctor will use it to properly locate the tumor region, establishing the region to be treated and also the healthy organs around it, as the regions that must be protected during the treatment.
7. During this simulation, accessories are chosen to help you settle down and feel comfortable on the device's bed. These accessories will always be the same used every day during your treatment, to ensure that you are always in the same position.

8. There are several accessories for each region of the body and their choice depends on which region is being treated. For example, for head and neck it will be necessary to use a mask, in order to immobilize the movements of your face, so that you do not move during the treatment. This plastic mask is molded on your face during the simulation. When it is firstly placed on your face, it will be soft and wet, but stay calm, the mask is full of holes and you can breathe normally at all times. When the mold will be in contact with your face until it dries and harden, taking the shape of your face. This process may take more than twenty minutes, but the staff will always be by your side, watching and helping you. Inform the staff immediately if the grip is too strong to handle, as the purpose is to immobilize and never hurt you. If necessary, new adjustments or a new mask will be made. Once the mold has dried and the simulation exam performed, you will be excused for that day.
9. After your CT scan has been done, your treatment planning begins to be calculated by your physician and medical physicist. When its completed, the plan information will be transferred to the treatment machine. Wait for the hospital staff to contact you, in the next few days you will be called to start your first day of treatment.



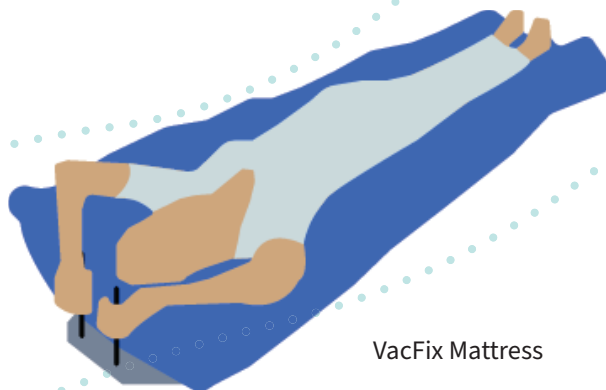
This is an example of a mask used for treatment.

Pay attention to your positioning. If you feel discomfort, let the staff know.



Reminder: Do a daily weight control using a scale, they are usually available in the radiation therapy sector and you will be guided by the staff to weigh yourself every day. This control is important so that the staff is aware if you are losing a lot of weight. If this occurs, the treatment may be interrupted to make a new mask, after all, losing a lot of weight can loosen the mask and you will have space to move, and this is not allowed. Try to eat well to avoid weight loss and always weigh yourself without shoes or other items you are carrying.

Another accessory that can also be used in some cases is a mattress that molds itself to the body shape, again with the aim of immobilizing you.



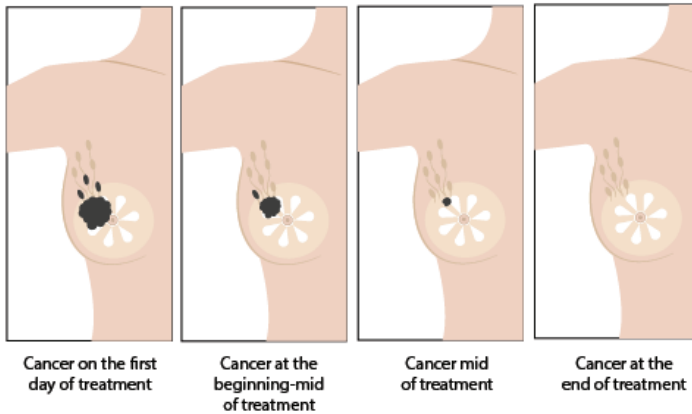
VacFix Mattress

10. You will receive some markings on your skin and they are usually made using a pilot pen or special ink which is usually called a tattoo. But calm down, these little marks are usually very small, similar to spots on your body and are extremely important, as they help the staff to position and align you in the treatment machine during every treatment day.
11. When you return to start your first day of treatment, you will be guided by a technician/technologist on what your treatment routine will be like for the next few days.
12. You will visit the waiting place you have to go before every treatment.
13. Gowns or disposable clothes will be given for you to use during all the days of your treatment, although is possible in some circumstances to use your own clothes.
14. You will then go to the treatment room that is equipped with real-time cameras so that the staff can accompany you in your every move, after all you will always be assisted.

15. On the first day of treatment, technicians/technologists, physician, and physicists usually monitor your positioning and make the necessary adjustments before starting the process, so it is common to hear a lot of talk or even numbers and math being made at that moment.
16. You will lie on the treatment bed of a Linear Accelerator, which will be responsible for emitting radiation at the place to be treated.
17. When you lie down, they will look on your body for the markings you received on the simulation day and maybe make new ones in order to center you with the lasers that are installed in the room. Do not try to remove these markings, they are a guide to your placement.
18. For you to be center in regards to the radiation beam, it will be necessary to touch you and turning until you get into the correct position.
19. You will be able to see the colored laser lights in the room aimed at your skin markings and these lights are harmless, they just help to position you correctly every day.
20. After your alignment it is necessary that you stay very still to remain in the position in which you were placed so that when starting the treatment the radiation reaches the correct place with total precision.
21. You will receive radiation for an average five minutes, and you will see the radiation therapy machine spinning around you and making loud noises.
22. You may be informed that before starting the treatment it will be necessary to take some x-ray images, rest assured because these images are taken in the same place and by the same machine that will perform the treatment. These x-ray images will not be used for medical diagnosis, but to check your position and the machine alignment before performing the treatment.

23. Rest assured, because throughout this process you will be able to breathe normally, but you will not be able to move under any circumstances until you are told that the treatment is over.
24. Staff will leave the room before treatment begins so they can handle the radiation machine in an adjoining room.
25. Rest assured, in addition to real-time cameras to accompany you, the rooms are also equipped with an audio and sound system for easy communication.
26. If you are not feeling comfortable or well, be sure to inform the staff before they leave the room, or if they have already left, some guidelines such as calling the staff are valid, as long as you don't move. Since the rooms have a camera, audio and sound system, the staff can interrupt the treatment at any time.
27. You will not be able to feel the radiation in your body, nor will you be able to hear, see, or even smell the radiation.
28. The first day of treatment is usually the most tiring as you go through an accessories check list and adaptation, and planning data analysis. The next few treatment days are usually a little faster.
29. The entire process inside the treatment room will take an average of 15-30 minutes, as most of that time is spent putting you in the correct position and doing data checks.

30. Your body will receive radiation, however it does not turn people into radioactive sources and you can feel safe being around other people, whether they are pregnant women, babies, or even small children.
31. There is over 100 years of scientific research and development involved in your treatment. Trust that the entire staff around you wants to see you well.
32. This is the most important part: **DO NOT MISS YOUR TREATMENT.** If you are experiencing something like depression, difficulties in making an appointment, difficulties with transportation, pain or anything else, always inform the healthcare professionals around you.
33. Your treatment is calculated to be done in a certain number of days. That's because cancer cells don't die all at once. The radiation kills the cellular layers that form the cancer little by little. That's why following your treatment plan is essential!

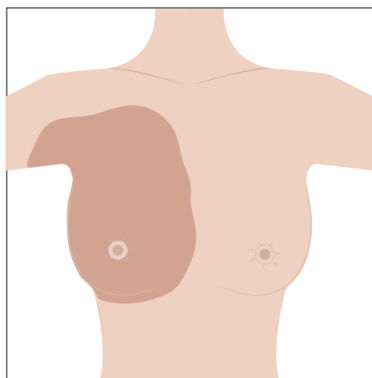


Step 5

What can you expect from this treatment?

Radiation, in addition to killing and delaying the spread tumor cells, can also reach some healthy regions close to the treatment region. Physicians and medical physicists seek to carry out a plan with the objective of always trying to preserve as many healthy regions as possible during treatment, but even if these regions suffer from side effects, they will always be monitored.

One of the most common and expected side effects of radiotherapy is the skin lesions called radiodermatitis, ranging from mild, moderate, or severe.



Example of breast radiodermatitis.



Your skin will probably be very red or a little purple over the course of the treatment, but this is common.

To carry out a follow-up control of radiodermatitis, you will be instructed to consult with the nursing team so that they can observe your skin and thus guide you with the care of your skin and which medications you will have to use.



Radiotherapy doesn't hurt while it's being applied!!!! But you may experience some side effects. Look for resources in your hospital to help you overcome them. Remember that following the right treatment will bring you the best possible result.

Step 6

What help you can get beyond treatment?

Several feelings can arise for those who are in the tireless fight against cancer such as fear, anger, and frustrations.

Some recommendations can help and assist in keeping the mind focused, busy, and involved on other activities, such as:



Distract yourself with a good conversation or look for support groups.

Make friends with other patients from the same treatment sector as yours, you can support each other and form a good friendship.



If you have any hobbies that you like to practice, consult your doctor to see if you are allowed. If you are, enjoy!

Or, look for other entertainment options like good movies, books, or other things that make you feel good and busy.



But above all, trust the professionals around you. Ask for help when you need it!

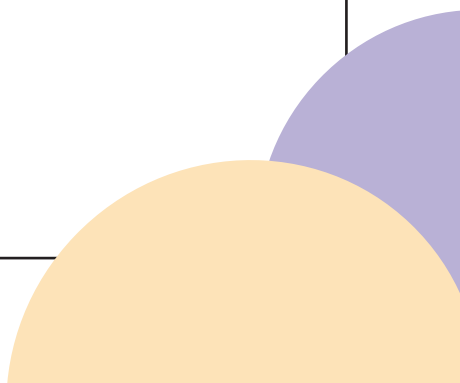
I hope I've helped you this far. I wish your treatment be a success.



PATIENT DIARY

Treatment fraction	N°	Date: / /
How was it?		
How did I felt?		
What do I need to ask the doctor?		

<p>Do I need any help?</p>
<p>How am I sleeping?</p>
<p>How am I eating?</p>
<p>How am I feeling in general?</p>



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