

## What to Expect During Radiation Treatment

The radiation therapists will set-up your treatment. This takes a few minutes. You must do your best to lie still and allow the therapists to position you for treatment. They need to make sure the measurements are the same as they were in the planning stage.

The therapists will take images or films the first day of treatment. Some patients will have imaging every day before treatment if the radiation oncologist has ordered image-guided radiation therapy. Most patients will have images or films taken every five treatments. These images or films are not used for diagnostic purposes as we cannot tell if the tissues we are treating are improving or not with images or films. We compare the images or films to the CT simulation or Acuity simulation images to make sure everything is treated as your radiation oncologist prescribed. Sometimes patients lose or gain weight during treatment and this allows us to make adjustments throughout the treatment course.

Your daily radiation treatments take approximately fifteen minutes from the time you enter the treatment room. We take as much time as we feel necessary to ensure the best treatment possible. Your radiation therapy will continue Monday through Friday (excluding holidays) for the number of treatments your radiation oncologist has prescribed. You will have the same appointment time each day. Every effort will be made to start your treatment at the scheduled time. We sometimes experience delays due to emergency patients, technical problems, and other difficulties. We also have pediatric anesthesia cases, and the schedule may be altered to accommodate the anesthesia team. We will try to notify you in advance if possible.

You will see your radiation oncologist and nurse at least once a week while you are undergoing treatment. If you are having any problems or questions, let us know when you come in for your treatment, or call the department and your nurse will meet with you.

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If it has been more than eight business days after your CT for treatment planning and you have not heard from us, please call 717-531-5354. If you have any problems or questions regarding pain management, medication, or coordination of chemotherapy start date, please call the nurse you met at your consultation at 717-531-8024.

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**PENNSTATE HERSEY**  
 **Milton S. Hershey  
Medical Center**

**Good People. Great Medicine.™**

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**PENNSTATE HERSEY**  
 **Cancer Institute**

*defined*  
**Radiation Oncology**

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Welcome to Penn State Hershey  
Cancer Institute.

The radiation oncology team developed this brochure to provide patients and their families with information about radiation treatment. While one of our radiation specialists shows you the radiation oncology treatment area, please feel free to ask us questions about what to expect, how radiation therapy works, and more. We are partners in your care, and hope that your experience here will exceed your expectations of quality care.

## About Radiation Oncology

During radiation oncology, high energy X-rays are used to treat cancer either by destroying the cancer cells or by making them unable to grow and divide. In external beam radiation, a machine called a linear accelerator is used to produce a beam of rays that is directed to the tumor or the part of your body that is being treated.

### Simulation

Simulation is the first step in planning for your radiation treatment. Using a dedicated CT or X-ray simulator, the radiation therapist follows instructions from your radiation oncologist. We make any immobilization devices necessary to ensure every treatment is delivered to the same area every treatment. We may ask you to fast for four hours prior to your CT simulation if your radiation oncologist has ordered IV contrast. This procedure takes approximately one hour.

The therapist uses ink to place permanent skin marks on the CT reference points. We may also use permanent markers to outline the treatment areas. We recommend not wearing new clothing to any simulation appointment as the markers and ink may ruin your clothing.

Permanent skin marks allow us to precisely place our treatments on a daily basis, and allows you to wash as you normally would. Please do not use excessively hot water or deodorant soaps in the treatment area as you need to pamper your skin. Lotion may not be placed on the treatment area four hours prior to treatment. If your underarm area will be in the treatment field, we will provide you with special deodorant to use during treatment.

We also use PointGuards to protect any temporary marks we may place. You may wash gently over these marks. Please pat those dry; do not rub. The PointGuards are specially formulated as to not cause skin irritation, however on occasion, they may irritate the skin. If this happens, please call our office.

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We are now offering tours of Radiation Oncology Thursday evenings so you and your family can see where you or your loved one will go for simulation and treatment. Please call Maria Singer at 717-531-5354 to schedule your tour. Thank you for choosing Penn State Hershey Cancer Institute.

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### Treatment Planning

After you have CT simulation, the dosimetrist carefully calculates the dose of radiation to make sure the tumor gets the radiation prescribed by the radiation oncologist. A number of treatment plans are developed to best destroy the tumor while sparing the normal, healthy tissues. Many of these treatment plans are very complex. The dosimetrist works with your radiation oncologist and a medical physicist to choose the treatment plan that is best for you. This process, including the quality assurance plan necessary for certain treatments, takes approximately ten business days from CT simulation. If we need to use a MRI or PET study for treatment planning, it may be longer than ten days.

Once your treatment plan is developed, our team will contact you to schedule your first appointment. This appointment is either on the treatment unit your radiation oncologist specified, or, on the Acuity (our X-ray simulator). This appointment takes approximately 45 minutes. There are no restrictions on eating, drinking, or taking medications. Please take any previously prescribed pain medications if you have difficulty holding still.

## Your Radiation Oncology Treatment Team

Radiation Oncologists

Nurses

Radiation Therapists

Medical Physicists

Medical Dosimetrists

Administrative Secretary

Medical Office Assistants

Medical Assistant

