ASCO ANSWERS

RADIATION THERAPY

WHAT IS RADIATION THERAPY?

Radiation therapy is the use of high-energy x-rays or other particles to kill cancer cells. The goal of radiation therapy is to kill the cancer cells without harming the surrounding healthy tissue. It may be used along with other cancer treatments or as the main treatment. Sometimes radiation therapy is used to relieve symptoms (called palliative radiation therapy). More than half of all people with cancer receive some type of radiation therapy.

Find additional cancer information at www.cancer.net.

WHAT ARE THE DIFFERENT TYPES OF RADIATION THERAPY?

The form of radiation therapy depends on the type of cancer being treated. The most common is called external-beam radiation therapy, which is radiation given from a machine outside the body. When radiation treatment is given using implants, it is called internal radiation therapy or brachytherapy. Other types of radiation therapy include proton therapy, three-dimensional conformal radiation therapy (3D-CRT), intensity-modulated radiation therapy (IMRT), and stereotactic radiation therapy.

WHAT SHOULD I EXPECT DURING RADIATION THERAPY?

Before treatment, you will meet with a radiation oncologist, a doctor who specializes in using radiation to treat cancer, to evaluate whether radiation therapy is necessary. If you choose to receive radiation therapy, you will be asked to give written permission and undergo tests to plan the treatment and assess the results.

Your first radiation therapy session is called a simulation and does not involve an actual treatment. During this visit, the medical team adjusts the radiation beam to target the tumor, the location of which may be marked on the skin with a temporary or permanent tattoo. Once treatment begins, your radiation oncologist will evaluate your progress weekly and may adjust your treatment plan as needed. The best way to care for yourself during radiation therapy is to plan for extra rest; stay on a balanced, nutritious diet; treat skin with lotions approved by your health care team; minimize sun exposure to the treated area; and seek emotional support.

WHAT ARE THE SIDE EFFECTS OF RADIATION THERAPY?

The side effects of radiation therapy vary from person to person and with the type and location of cancer, treatment dose, and the person's health. For some people, radiation therapy causes few or no side effects. For others, the side effects are more severe. Side effects may include fatigue, mild skin reactions, upset stomach, and loose bowel movements that often begin by the second or third week of treatment and may last for several weeks after the final radiation treatment. Most side effects go away after treatment, although some long-term side effects may occur months or even years after treatment. These include infertility (the inability to become pregnant or father a child), secondary cancers, and, for men receiving radiation therapy for prostate cancer, impotence (the inability to achieve or maintain an erection). Your health care team will work with you to ease or prevent many of these side effects.

ASCO Answers is a series of fact sheets produced by the American Society of Clinical Oncology. ASCO is the world's leading professional organization representing doctors of all oncology subspecialties who care for people with cancer.

QUESTIONS TO ASK THE DOCTOR

Regular communication is important in making informed decisions about your health care. Consider asking the following questions of your doctors.

- What is the type and stage of my cancer? What does this mean?
- Do I need radiation therapy? If so, what type?
- What is the goal of radiation therapy?
- How often will I receive radiation therapy?
- How much time will each treatment take?
- Will each treatment be the same? Does the radiation dose or area treated change throughout the period of treatment?
- What can I do to get ready for this treatment?
- Will you describe what I will experience when I receive radiation therapy? Will it hurt or cause me discomfort during the treatment?
- How will this treatment affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- What are the potential side effects of this treatment? What can be done to ease any side effects?
- What are the possible long-term effects of this treatment?
- Will this treatment affect my ability to become pregnant or have children?
- Whom do I call for questions or problems?
- Is there anything else I should be asking?

For more information, visit ASCO's patient website, www.cancer.net, or call 888-651-3038.

Cancer.Net™

Doctor-Approved Patient Information from ASCO®

TERMS TO KNOW

Computed tomography (CT) scan:
An imaging test that creates a three-dimensional picture of the inside of the body with an x-ray machine to detect any abnormalities or tumors.

Dosimetrist:
A member of the radiation treatment team who helps plan treatment

Intensity-modulated radiation therapy (IMRT):
Use of several small beams of radiation with different intensities to better treat the tumor while sparing healthy tissue

Medical radiation physicist:
A member of the treatment team who determines the dose for each patient and helps design the treatment plan

Proton therapy:
Uses parts of atoms called protons instead of x-rays to treat cancer

Radiation oncology nurse:
A member of the treatment team who can answer questions and provide information and support

Radiation therapist:
The member of the treatment team who will give your radiation treatments

Stereotactic radiation therapy:
Used to deliver a large, precise radiation dose to a small tumor area, usually in five or fewer sessions.

Three-dimensional conformal radiation therapy (3D-CRT):
Use of computers to make detailed three-dimensional pictures to aim radiation directly at the cancer