

FOR YOUR PATIENT

Resources

American Society for Radiation Oncology

1-800-962-7876, www.astro.org

Information to help patients and their families better understand their treatment options

C-STAR

www.cancer-star.org

Information and advocacy for cancer patients' support teams

MyOncoFertility

1-866-708-3378, www.myoncofertility.org

A patient education resource provided by the Oncofertility Consortium

National Lymphedema Network

1-800-541-3529, www.lymphnet.org

An internationally recognized nonprofit organization that provides education and guidance to lymphedema patients, health care professionals and the general public

Patient Advocacy Foundation

1-800-532-5274, www.patientadvocate.org

Information and assistance with effective mediation and arbitration services

RadiologyInfo

1-800-381-6660, www.radiologyinfo.org

Radiology information resource for patients

Vital Options International

1-800-477-7666, www.vitaloptions.org

A not-for-profit cancer communications, support, and advocacy organization with a mission: to facilitate a global cancer dialogue

Wellness Community

www.thewellnesscommunity.org

A global network of information and resources for patients and their families

Visit the For Your Patient tab at www.oncologynurseadvisor.com for these and many more Web sites that offer information and resources for patients and their families and caregivers.

Radiation therapy: What it is and how it works

RADIATION therapy is the use of high-energy radiation to shrink tumors or kill cancer cells. It can be delivered as external beam radiotherapy, internal radiation therapy, or systemic radiation therapy.¹ External beam



radiotherapy methods deliver a beam of high-energy x-rays or gamma rays from a machine outside the body that are targeted at the tumor. In internal radiation therapy, a radioactive material contained in needles, seeds, wires, or a catheter is placed in or near the tumor. Systemic radiotherapy is radioactive iodine delivered through the blood.¹

Radiation therapy is used to treat many types of cancers including bladder, breast, gynecologic, lung, prostate, skin, and head and neck cancers; bone and brain metastases; brain tumors; lymphomas; and cancer of the colon, rectum, and anus.² Two-thirds of all cancers are treated with radiation.²

Treatment goals are curative or palliative. Curative treatment seeks to shrink the tumor, stop tumor growth, or kill any residual cancer cells after surgical removal of the tumor. Palliative radiation therapy is used to shrink tumors in the brain or bone that have spread from other parts of the body. It is also used to shrink tumors in the spine and the bone to relieve pain.

REFERENCES

1. Radiation therapy for cancer. National Cancer Institute. <http://www.cancer.gov/cancertopics/factsheet/Therapy/radiation>. Accessed March 21, 2011.
2. RT Answers—Answers to Your Radiation Therapy Questions. www.ranswers.org. Accessed March 21, 2011.

The radiation therapy team

THE MEMBERS of the radiation therapy team work together to develop, administer, and monitor radiation therapy plans for patients. Together, these specialists ensure that treatments are administered safely and accurately.

Radiation oncologists are physicians who oversee radiation therapy treatments. They monitor patient progress throughout treatment, making necessary adjustments to keep the radiation on target while minimizing side effects.

Radiation oncology nurses assess the patient throughout treatments. They can explain the possible side effects of radiation therapy, provide information on how to manage those effects, and help patients cope with the changes they may experience. Radiation oncology nurses also provide support and counseling for patients and their families.

Radiation therapists administer the prescribed radiation treatments under the radiation oncologist's supervision and maintain the patient's treatment

record. Radiation therapists perform regular checks on the treatment machines to ensure they are working properly.

Medical radiation physicists work with the radiation oncologist to tailor complex treatments for patients and oversee the work of the dosimetrists. Medical radiation physicists develop and direct quality control programs for equipment and procedures, performing measurements and other safety tests on the treatment machines to ensure they are working properly.

Dosimetrists calculate the prescribed radiation dose to ensure that the tumor is targeted with the prescribed dosage. Dosimetrists work closely with radiation oncologist and medical physicist to develop treatment plans that will best destroy the tumor while sparing normal tissue.

Social workers provide support and counseling for patients and their families. Social workers can help secure services such as home care, transportation, financial support, and emotional support patients may need during their treatments.

Nutritionists/dietitians help patients maintain a healthy diet during treatment. They can help patients make dietary changes when treatment plans affect their appetite.

Physical therapists provide therapeutic exercises that help patients manage side effects and alleviate pain.

Patient navigators assist patients with understanding their health care options. Patient navigators know who patients should call and where to go to expedite their health care needs efficiently.

Dentists/dental hygienists are included in the radiation therapy team for patients who are undergoing treatment of head and neck cancers.

Source: Treatment team. RT Answers—Answers to Your Radiation Therapy Questions. www.ranswers.org. Accessed March 21, 2011.

Personal care tips

- You should make sure you get plenty of rest. Fatigue is a side effect of radiation therapy you may experience.
- You should eat a balanced, nutritious diet. A nutritionist can help you plan menus, and make any necessary dietary adjustments.
- You should clean the skin daily with warm water and a mild soap. Your radiation oncology nurse can recommend the soap to use.
- You should avoid using any creams, lotions, perfumes, deodorants, or powders on the skin unless recommended by your doctor or nurse
- You should avoid placing anything hot or cold (heating pads or ice packs) on the treated skin.
- You should avoid sun exposure. When outdoors, wear protective clothing and a hat and use sunscreen with SPF 15 or higher.
- You should ask for help and seek support. A cancer diagnosis and treatment can be a very stressful time. However, many resources are available to help patients deal with their feelings, treatments, and other life needs.

Source: Personal care. RT Answers—Answers to Your Radiation Therapy Questions. www.ranswers.org. Accessed March 21, 2011.

Factors that determine type of radiation therapy

- **Type of cancer**
- **Size of cancer**
- **Location of cancer in the body**
- **Proximity to normal tissues which are sensitive to radiation**
- **How far into the body the radiation needs to travel**
- **General health and medical history of the patient**
- **If treatment includes other types of cancer treatment**
- **Factors such as patient age and concomitant medical conditions**

BY THE NUMBERS

About 50%

Percentage of patients with cancer who receive radiation as part of their treatment

200-300

Number of patients seen by the average radiation oncologist annually

29

Number of treatments administered to the average patient receiving external beam radiation therapy

4,500-6,500

Number of treatments for which the average linear accelerator is used

81,580

Estimated number of patients who received brachytherapy treatments in 2004