

Greenwich Hospital
EXTERNAL RADIATION THERAPY

PATIENT/FAMILY INFORMATION SHEET

What is external radiation therapy?

External radiation therapy utilizes ionizing radiation to cure localized cancers and to relieve the symptoms of tumors that have become advanced. The radiation is delivered by a highly sophisticated machine called a linear accelerator. The radiation that is produced by the linear accelerator is tightly focused and does not affect parts of the body out of the area being treated. Radiation therapy is used to treat many different kinds of cancer and in early stages of disease can cure upwards of ninety percent of patients.

How does external radiation therapy work?

Cells in the body are constantly dividing. Radiation therapy damages the DNA of the cell making cell division difficult. Normal cells can repair the damage from radiation while tumor cells cannot. The damage accumulates in the tumor cells, and unable to divide they eventually die. Radiation is usually given over a period of many weeks (three to eight) so as to minimize the side effects of treatment.

What are the cancers commonly treated with external radiation?

Radiation therapy is many times the treatment of choice for head and neck cancers and prostate cancer. In patients with breast cancer it is used after limited surgery as an alternative to a radical mastectomy. Radiation therapy is combined with chemotherapy following surgery for more advanced tumors of the rectum and stomach. Radiation is also utilized in treating some skin cancers and wide variety of other tumors.

How is radiation therapy given?

Prior to the first radiation treatment, a planning session (called a simulation) is performed to carefully outline the area to be treated and to ensure that normal tissue is avoided. A CT scan may be part of this planning process. Films are then taken on the linear accelerator to ensure accuracy of treatment delivery. Each week these films are repeated to verify the treatment. The physician sees the patient each week to manage any problems that may arise. Treatments are usually given once a day five days a week for three to eight weeks. Each treatment takes approximately fifteen minutes. The treatments are painless.

What are the side effects of radiation therapy?

Modern radiation therapy is associated with minimal side effects. The most common side effect is fatigue. Skin irritation can also occur. Hair loss does not occur with radiation unless the head is being treated. Other side effects of radiation therapy are dependent on the site being treated and can be managed by diet and medication.

For more information on radiation therapy or cancer, contact your physician or The American Cancer Society at 1-800-889-3340.

For more Patient Education Fact Sheets, see the Greenwich Hospital web site at www.greenhosp.org and click on Patients and Visitors, then Patient Education.