Editorial

iMedPub Journals
http://www.imedpub.com

Journal of Medical Physics and Applied Sciences
ISSN 2574-285X

2021
Vol. 6 No.2:e006

Benefits and Effectiveness of Radiation Oncology

Nirmala B*

Department of Chemical Engineering, Andhra University, Visakhapatam, India

Received: March 05, 2021; **Accepted:** March 22, 2021; **Published:** March 29, 2021

***Corresponding author:** Nirmala B, Department of Chemical Engineering, Andhra University, Visakhapatam, India, E-mail: nirmala_b@gmail.com

Citation: Nirmala B, (2021) Benefits and Effectiveness of Radiation Oncology. Insights Med Phys Vol.6 No.2: e006.

Editorial Note

Radiation oncology (radiotherapy/radiation therapy) is a medical specialty that is an essential part of a multidisciplinary approach to cancer treatment. It uses high energy x rays (photons) most commonly delivered through a linear accelerator. These therapeutic x rays are painless and invisible and are used to treat a number of different cancers. Radiation therapy is a highly effective cancer treatment with wide-ranging uses. Radiation therapy leads to cancer cure in many patients (either alone or with other treatments) and relieves symptoms or prolongs survival in more advanced cancers. There are proven roles for nearly all cancer types.

Radiation therapy is a highly targeted treatment accurately controlling the cancer wherever it might be in the body. This allows the cancer cells to be killed or reduced in number whilst protecting the majority of other organs and tissues in the body. Radiation therapy contributes to 40% of all cancer cures world-wide as well as improving the quality of life for many others. Despite this great benefit, the total cost of radiation therapy to the Commonwealth government is less than 9 cents in every dollar spent on all cancer diagnosis and treatment. Each year of life saved in Australia by radiation therapy costs us less than one saved using other cancer treatments. In other words, radiation therapy is a very cost-effective cancer treatment.

A Radiation oncologist is a specialist medical doctor with training in the use of radiation therapy (also called radiotherapy) and in the overall medical care of cancer patients. Radiation therapy can be used to cure or reduce the symptoms of cancer.

They are ultimately responsible for assessing individual patients, determining the best management plan, overseeing treatment and assessing progress. Radiation oncologists may order tests and imaging, prescribe medications and consult with other doctors involved with cancer treatment.

Radiation oncologists work closely with radiation therapists and radiation oncology medical physicists to ensure that the treatment is safe and accurate. After treatment, ongoing follow-up by the radiation oncologist is common, in helping to assess the patient's response to treatment and manage any further developments in the care of the patient.

Radiation therapists are the people patients see on a daily basis who deliver the radiation treatment. They work closely with the radiation oncologist to calculate the radiation plan, and they operate advanced technology and imaging equipment to ensure the treatment is delivered accurately and safely. The radiation oncologist will meet regularly with patients and their careers to discuss what is involved before, during and after treatment.

One of the reasons that radiation therapy is so cost-effective is that it is usually given as out-patient treatment- people can come in for short visits and often continue their normal activities. Although radiation therapy centers are expensive to set up, a typical treatment machine (linear accelerator) can treat more than 30 patients each day for up to 10 years.

For many common cancers, such as breast cancer, bowel cancer, uterine cancer, skin cancers and prostate cancer, radiation therapy is highly effective in reducing the risk of cancer recurrence if delivered either before or after surgery. For some cancers that are too advanced to be cured, radiation therapy is very effective for pain and other problems caused by cancer, such as bleeding from the lung or bladder. For example, pain in the bones from the spread of cancer can be improved significantly or be completely removed in around 75% of patients. New technological advances in radiation therapy have made life better for cancer patients in recent years by making treatments even quicker, more accurate and effective. Ongoing investment in new technology is vital.