“Introduction to Radiation Therapy”

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Abstract

Radiation therapy (RT) is one of the 3 mainstream treatments for cancer. It is used alone or in an adjuvant setting. In RT, high-energy photon radiation in the 6-24 megavolt (MV) range is used to target cancer cells to disrupt cellular processes and prevent cancer cell division. The goal of RT is to destroy cancer cells while minimizing the destruction of healthy cells.

Modern RT continues to develop at an unprecedented rate mainly to due to advances in computer technology and imaging equipment. In the last two decades, “three-dimensional conformal RT” (3-D CRT), “4-D RT”, “intensity-modulated radiation therapy” and “adaptive RT” treatment modalities have emerged, coining some of the buzzwords in the Radiation Oncology community. The aim of this talk is to introduce RT and present some of the newer technologies that are used to treat patients currently.

Bio

Prema Rassiah, Ph.D. is a Medical Physicist and Assistant Professor at the department of Radiation Oncology (Huntsman Cancer Hospital), University of Utah. She is an active member of the American Association of Physicists in Medicine, the American Board of Radiology and the American College of Radiology. Prior to joining the HCH, Dr. Rassiah
was a medical physicist at the Cancer Therapy and Research Center, University of Texas and also served as the Director of the Medical Dosimetry program at the University of Texas. Her clinical and research interests include intensity-modulated radiotherapy, radiobiological and dosimetric algorithms.