



## Cancer and Radiation Therapy

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### Editorial

Cancer also known as a malignant tumor is the second leading cause of death in the USA after the heart disease. According to the recent statistics of the United States Cancer Statistics (2014), nearly one of every four deaths in the United States is due to cancer. This effect results in large economic cost such as loss of income and productivity. For instance, in 2009, the National Institutes of Health (NIH) estimates that the overall costs of cancer were \$216.6 billion including \$86.6 billion for direct medical costs (total of all health expenditures) and \$130.0 billion for indirect mortality costs (cost of lost productivity due to premature death) [1]. New research findings raise concerns about the causes of Cancers and the appropriateness of the methods or techniques used for detection and treatment. Radioactivity and radiation were discovered more than a century ago. Nowadays, radiation is a foremost part of cancer treatment and more than half of all people with cancer get radiation as at least part of their cancer treatment. Radiation is the emission or transmission of energy in the form of waves or particles through space or material medium. In Radiation Therapy, radiation works by damaging the genes (DNA) that control how cells develop and separate. When genes of cancer cells are damaged, they can't grow and over time, the cells die and dwindle tumors [1].

Indeed, the science of human development tells us that cancer has always been in the human history. Papyrus, nearly 1600 BC, provide the earliest written record on cancer, describing the Cancer of breast [2]. About 400 BC, Hippocrates delineates various class of Cancer [2]. Through the Medial period, it turned tolerable for physicians to anatomize bodies to discover the cause of death. The invention of the

optical microscope in the 17<sup>th</sup> century lead to the discovery that the Cancer strew from the primary tumor through the lymph nodes to other sites. This perspective was formulated for the first time in late 1800s by the English surgeon De Morgan [3]. For the last several decades, the research community has been working hard to find the causes, cures, and treatment plans to reduce the burden of Cancer. Among the majors institutions engaged in the fight against the cancer, the American Cancer Society has invested more than any single nongovernmental or not-for-profit organization in the US and has make possible major cancer breakthroughs since 1946.

As in any letter to the editor of this type, significant model efforts have been disregarded. I profoundly invigorate researchers in the field of Cancer and Radiation Therapy to submit their excellent works to the Journal of Nuclear Medicine and Radiation Therapy which is one of the most promising journal to publish the most reliable source of information on discoveries and current developments in radiation. To those who are inspecting new incursion into the field of Nuclear Medicine and Radiation therapy, I stimulate you to join a body of scientists who like to push their intuition and themselves to the boundaries.

### References

1. <http://www.cancer.org/research/cancerfactsstatistics/allcancerfactsfigures/>.
2. Hajdu SI, Thun MJ, Hannan LM, Jemal A (2011). A note from history: landmarks in history of cancer, part 1. *Cancer* 117: 1097-1102.
3. Grange JM, Stanford JL, Stanford CA (2002) Campbell De Morgan's 'Observations on cancer', and their relevance today. *J R Soc Med* 95: 296-299.