DESIGN OF A RADIATION THERAPY CENTER FOR CANCER

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Abstract

Radiation therapy is a cancer treatment modality that uses high-energy radiation to shrink and kill cancer cells by damaging their DNA. However, this modality can also damage the DNA of normal cells, making it important for the treatment to be carefully planned to minimize what may be referred to as "collateral damage" incurred by the treatment.

The frantic search for cure for the dreaded disease, cancer, has caused the very fast pace of the progress of technologies such that new treatment protocols had become available to doctors and their patients at an equally fast pace, giving hope to patients now where they may have given up in the past. This fast pace, on the other hand, has made it more difficult for facilities planners and designers to produce functional spaces, forms and architecture, in general, that can accommodate with flexibility the requirement of fast change. The fearsome nature of treatment protocols delivered through the use of fearsome-looking huge equipment has also made it more difficult for facilities planners and designers to create spaces that somehow would help assuage the fear and give comfort to patients already heavily stressed by their illness.

This paper is a sequel to a paper presented by the principal author in the UIA Healthcare Forum 2013 in Toronto, Canada, entitled "The Design of a Breast Cancer Center" which discussed the human aspect of planning and designing a Breast Cancer Center containing an Infusion Unit that delivers a treatment modality, chemotherapy. While discussing the highly technical nature of the topic, this paper will also discuss the human-centeredness and patient-centeredness of the design of a facility for another treatment modality, radiotherapy.