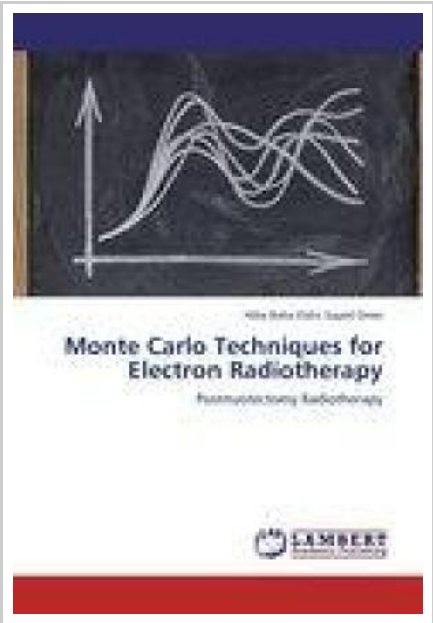

Monte Carlo Techniques for Electron Radiotherapy

By Hiba Baha Eldin Sayed Omer

LAP Lambert Academic Publishing Mrz 2012, 2012. Taschenbuch. Book Condition: Neu. 220x150x9 mm. This item is printed on demand - Print on Demand Neuware - The work was divided into three phases. The first was simulating and verifying ELEKTA SL18 Linear accelerator for electron beams using EGSnrc Monte Carlo Codes (BEAMnrc, DOSXYZnrc and BEAMDP) for different energies, field sizes and gantry angles. The simulated beams were then used for postmastectomy radiotherapy using transported patient CT scans in DICOM format, in the second phase. The three- dimensional depth dose files produced by DOSXYZnrc were transfered to XSTING, a home build software that was previously designed for stertactic radiotherapy and then modified for electron and photon radiotherapy, to generate dose-volume-histograms (DVHs). The generated DVHs were used to evaluate the risk to the lung and the heart. In the third phase a home-built dose reponse evaluation tool (DORES) was used to estimate the risk of radiation induced pneumonitis and lung fibrosis. Single electron beams were proved to induce low risks to the heart and lung, but had the limitation of poor target coverage. Multiple fields were recommended for frther investigation. 148 pp. Englisch.

Reviews

This publication can be really worth a go through, and a lot better than other. It is actually writter in straightforward words and phrases instead of confusing. I discovered this pdf from my dad and i suggested this publication to learn.

-- ***Jackeline Rippin***

A high quality book and also the font employed was intriguing to read. I was able to comprehended every thing out of this created e book. You wont really feel monotony at whenever you want of the time (that's what catalogues are for concerning should you check with me).

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