

عنوان مقاله:

Analysis of Commissioning Parameters and its Validation of O-Ring Gantry Based Medical Linear Accelerator HalcyonTM for Improved Radiotherapy Technique

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خلاصه مقاله:

Introduction: Popularly, teletherapy (telecobalt/LA) equipment is based on a C-arm gantry system. Recently, a fast O-ring gantry system introduced a medical linear accelerator (LA) to smoothen the workflow of treatment of cancer patients because of the increasing trend of the number of cancer cases over the past few years. This study aimed to analyze the commissioning parameters and validation of the O-ring gantry-based LA for improved radiotherapy techniques. Material and Methods: Three-dimensional (۳D) radiation field analyzer (RFA) used to commission HalcyonTM LA. It is used for measuring percent depth dose (PDD), profiles, and output factors. Results: TPS data was validated by comparing it with our measured data. Plans per the TG-۱۱۹ protocol showed good agreement between treatment planning systems (TPS) calculated and measured doses. For patient-specific, QA plans showed good agreement with gamma evaluation criteria. Conclusion: Commissioning and validation of O-ring gantry system HalcyonTM LA was performed successfully.

کلمات کلیدی:

Linear accelerator O, ring gantry Commissioning Validation Radiotherapy technique

