

Linac Quality Controls Using An Electronic Portal Imaging Device

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Abstract : Monthly quality control checks for a Radiation Therapy Linac may be performed in a simple and efficient way once they have been standardized and protocolized. On the other hand these checks, in spite of being imperatives, require a not negligible execution times in terms of machine time and operators time. Besides it must be taken into account the amount of disposable material which may be needed together with the use of commercial software for their performing. With the aim of optimizing and standardizing mechanical-geometric checks and multi leaves collimator checks, we decided to implement a protocol which makes use of the Electronic Portal Imaging Device (EPID) available on our Linacs. The user is step by step guided by the software during the whole procedure. Acquired images are automatically analyzed by our programs all of them written using only free software.

Keywords : quality control checks, linac, radiation oncology, medical physics, free software

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