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IMPLEMENTATION OF A 3D QUALITY CONTROL SYSTEM WITH ANATOMICAL CORRELATION TO INTENSITY MODULATED RADIATION THERAPY (IMRT)

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Abstract: The quantity and correlation of the information using a traditional 2D method to quality control in IMRT is poor and not specifically to determine the clinical quality of a treatment plan. The development of matrix array with better algorithms and the use of a single standard of images DICOM have allowed the implementation of news tools; we present the procedure to implement the Compass system using chamber array into a daily routine to quality control in IMRT plan, The compass has several solutions in one package, first allows the pre verification of Monitor Units (MU) and the absolute dose calculation in our TPS, second we can check the dose distribution at the organs at risks (OAR) and targets defined in the plan using a independent algorithm, next using the detector system allows to evaluate the clinical impact at the dose distribution due to delivery of the planned treatment by the machine but in the geometry of the patient not in a phantom, finally the implementation of Compass reduce the time and optimize the quantity and correlation of the information with the quality of dose clinical delivery in the patients

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