Recently, another form of photon based therapy known as volumetric modulated arc therapy (VMAT) is gaining more attention in the radiation oncology community. This has led to numerous treatment planning studies, which have compared the dosimetric results between the IMRT and VMAT plans of the prostate cancer [2-10]. In 2013, Abdennebi et al [3] published an article entitled “Comparison of Dose Distribution between Intensity Modulated Radiation Therapy and Dynamic Arc Therapy in and out-of-Field for Prostate Cancer Treatment” in the Journal of Tumor. Abdennebi and colleagues [3] concluded that dynamic arc therapy (DAT) improves the dosimetric parameters of the prostate cancer treatment by reducing doses to the planning organ at risk volume and remaining volume at risk while keeping the same planning target volume coverage.

Treatment planning studies provide us the dosimetric information in selecting one treatment modality over the another. However, the results among various treatment planning studies may not be consistent with each other. This is mainly because of selection of beam parameters, dose calculation algorithm, plan optimization technique, and delivery technique of the treatment machine [4]. For example, Sze et al [5] studied the prostate cancer and reported that the double-arc technique (DA) produced higher bladder dose, whereas Yoo et al [6] showed that the DA produced lower doses to the bladder. The type of arc such as partial arc and full arc can also produce different dosimetric results as demonstrated by Rana and Cheng [8].

Furthermore, dosimetric studies typically report the average results but these results can be patient specific [2,4]. The difference in tumour location in patients, who have different anatomy, may provide different dosimetric results in the prostate cancer plans. Since the dosimetric quality of treatment plans (IMRT, DAT, VMAT) depend on different factors, one should interpret the results from treatment planning studies with carefulness.

CONFLICT OF INTERESTS

There are no conflicts of interest with regard to the present study.
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