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Letter to the Editor

Delineation guideline for the para-aortic lymph node region in cervical cancer

Dear Editor,

We read with great interest the paper entitled, "An atlas to aid delineation of para-aortic lymph node region in cervical cancer: Design and validation of contouring guidelines," which addresses guidelines for delineating the para-aortic lymph node (PAN) clinical target volume (CTV) in patients with cervical cancer [1]. The authors evaluated 21 patients with 39 pathological PANs identified via positron emission tomography–computed tomography (PET-–CT) and used asymmetrical margins to expand the aorta and inferior vena cava (IVC) and create a CTV with more favourable PAN coverage. The proposed CTV was validated in 10 additional patients with 29 PANs. The final proposed PAN CTV involved a generally 10-mm circumferential expansion (with 15-mm lateral expansion) from the aorta and 8-mm anteromedial and 6-mm posterolateral expansion from the IVC. The left renal vein marked the superior extent of the PAN CTV.

The variability in the upper extent of prophylactic para-aortic irradiation among centres likely reflects the lack of evidence and delineation guidelines [2]. We recently published sub-renal vein radiotherapy (SRVRT) findings to address the effects of prophylactic para-aortic irradiation with an upper extent of the left renal vein and the role of the risk-based radiation field in cervical cancer [3,4]. SRVRT with intensity-modulated radiotherapy reduced PAN recurrence without increasing severe toxicities, especially among patients with positive pelvic lymph nodes or FIGO III–IVA disease. However, prospective trials must validate the applicability of PAN guidelines and our findings in clinical practice. The EMBRACE II study may resolve this important issue.

Takiar et al. also proposed delineation of the PAN CTV based on the anatomical PET–CT distribution in their figure rather than providing a detailed definition, as in the authors' paper [5]. However, we observed some differences and identified questions for which the resolution would facilitate the use of this important guideline in clinical practice. First, Takiar et al. suggested an anterior margin close to the aorta and IVC, while the authors suggested 10- and 8-mm margin expansions from the aorta and IVC, respectively. Although the left para-aortic and aorto-caval areas appear to be most risky; more information is needed regarding the PANs anterior to these major vessels. As the riskiest area may be just anterior to major vessels, a limited anterior margin might reduce radiation doses to the bowel. Second, the 15-mm left lateral margin, rather than the iliopsoas muscle, was used as a lateral anatomical landmark. This margin raises concerns because of the risk of false-negative findings for micro-metastatic PANs on PET–CT [6]. Consistent with this, Ramirez et al. found that patients with positive pelvic lymph nodes and negative PANs on PET–CT had a histopathologically positive PAN rate of 22% [7].

We congratulate the authors on their work and hope that continued efforts such as theirs will ultimately lead to an evidence-based consensus regarding the international recommendations for CTV design in cervical cancer radiotherapy.

Conflict of interest

The authors declare no potential conflicts of interest.

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