Suggestion for the prostatic fossa clinical target volume in adjuvant or salvage radiotherapy after a radical prostatectomy.

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Abstract

BACKGROUND AND PURPOSE: To assess the location of recurrent tumors and suggest the optimal target volume in adjuvant or salvage radiotherapy (RT) after a radical prostatectomy (RP).

MATERIAL AND METHODS: From January 2000 to December 2012, 113 patients had been diagnosed with suspected recurrent prostate cancer by MRI scan and received salvage RT in the Samsung Medical Center. This study assessed the location of the suspected tumor recurrences and used the inferior border of the pubic symphysis as a point of reference.

RESULTS: There were 118 suspect tumor recurrences. The most common site of recurrence was the anastomotic site (78.8%), followed by the bladder neck (15.3%) and retrovesical area (5.9%). In the cranial direction, 106 (87.3%) lesions were located within 30 mm of the reference point. In the caudal direction, 12 lesions (10.2%) were located below the reference point. In the transverse plane, 112 lesions (94.9%) were located within 10 mm of the midline.

CONCLUSIONS: A MRI scan acquired before salvage RT is useful for the localization of recurrent tumors and the delineation of the target volume. We suggest the optimal target volume in adjuvant or salvage RT after RP, which includes 97% of suspected tumor recurrences.

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