The PSA-response to salvage radiotherapy after radical prostatectomy correlates with freedom from progression and overall survival.

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Abstract

BACKGROUND AND PURPOSE: In a retrospective analysis, we examined factors influencing the outcome of prostate cancer (PCa) patients receiving salvage radiotherapy (SRT) for PSA recurrence after radical prostatectomy (RP).

MATERIAL AND METHODS: 306 patients received 3D-conformal SRT at a median pre-SRT PSA of 0.298ng/ml. Post-SRT progression was defined as PSA ≥0.2ng/ml above nadir and rising further, or hormone treatment, or clinical recurrence. Data were analyzed with the Kaplan-Meier method and multivariable Cox regression.

RESULTS: Application of SRT at a PSA <0.2ng/ml correlated significantly with achieving a post-SRT PSA nadir <0.1ng/ml and with improved freedom from progression (median follow-up 7.2years). The post-SRT nadir <0.1ng/ml correlated significantly with less recurrences and with better overall survival. In multivariable Cox analysis restricted to pre-SRT parameters, a pre-SRT PSA ≥0.2ng/ml had the strongest impact (hazard ratio 2.4) on progression. If the post-SRT PSA nadir was included in the model, then failing the nadir was the most important risk factor (hazard ratio 8.1).

CONCLUSIONS: Early SRT at a PSA <0.2ng/ml is a favorable treatment option for post-RP biochemical recurrence. It correlated with a post-SRT PSA-nadir <0.1ng/ml which was associated with improved freedom from progression and overall survival.

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KEYWORDS: Biochemical recurrence; Prognosis; Prostate cancer; Radical prostatectomy; Salvage radiotherapy

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