METASTASES-DIRECTED STEREOTACTIC RADIOTHERAPY FOR OLIGOMETASTATIC CASTRATION-RESISTANT PROSTATE CANCER: MULTICENTRE SERIES OF 86 PATIENTS/ 117 LESIONS

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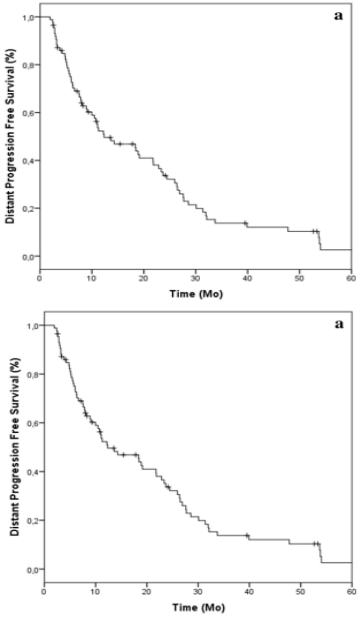
Table 1 Baseline patient's characteristics

Clinical characteristics: oligoprogressive mCRCP	Value
Number of patients	86
Age, median	65 (43–81)
GS at diagnosis	
6	8 (10%)
7	32 (37%)
8	20 (23%)
9	25 (29%)
10	1 (1%)
Risk class	
Very low and low	8 (9%)
Intermediate favorable and unfavorable	7 (8%)
High, very high and node positive	71 (83%)
Treatments at diagnosis	
Surgery	17 (20%)
Radiotherapy ± hormone therapy	17 (20%)
Brachytherapy	2 (2%)
Surgery plus adjuvant radiotherapy	16 (19%)
Surgery plus salvage radiotherapy	27 (31%)
Hormonal therapy	7 (8%)
PSA at oligoprogression (pre-SBRT) median	3.5 ng/ml (2.4–9.77)
Restaging	
Choline PET/CT	77 (90%)
CT/bone scan	9 (10%)
Number of lesions treated (for first SBRT course)	
1	60 (70%)
≥2	26 (30%)
BED ($\alpha/\beta = 3$ Gy)	
≤100	24 (28%)
>100	62 (72%)
TNM classification of lesions treated	
N (regional metastasis)	36 (42%)
Distant metastasis node or bone (M1a M1b)	50 (58%)



Abstract

Purpose Herein, we report the clinical outcomes of a multicenter study evaluating the role of SBRT in a cohort of patients affected by oligoprogressive castration-resistant prostate cancer (CRPC).

Materials and methods This is a retrospective multicenter observational study including eleven centers. Inclusion criteria of the current study were: (a) Karnofsky performance status > 80, (b) histologically proven diagnosis of PC, (c) 1–5 oligoprogressive metastases, defined as progressive disease at bone or nodes levels (detected by means of choline PET/CT or CT plus bone scan) during ADT, (d) serum testosterone level under 50 ng/ml during ADT, (e) controlled primary tumor, (f) patients treated with SBRT with a dose of at least 5 Gy per fraction to a biologically effective dose (BED) of at least 80 Gy using an alpha-to-beta ratio of 3 Gy, g) at least 6 months of follow-up post-SBRT.

Results Eighty-six patients for a total of 117 lesions were treated with SBRT. The median follow-up was 30.7 months (range 4–91 months). The median new metastasis-free survival after SBRT was 12.3 months (95% CI 5.5–19.1 months). One- and two-year distant progression-free survival was 52.3% and 33.7%, respectively. Twenty-six out of 86 patients underwent a second course of SBRT due to further oligoprogressive disease: This resulted in a median systemic treatment-free survival of 21.8 months (95% CI 17.8–25.8 months). One-year systemic treatment-free survival was 72.1%.

Conclusion SBRT appears to be a promising approach in oligoprogressive castration-resistant prostate cancer. Further investigations are warranted.