Smart Communications (SC81–SC88)
Focal therapy for prostate and kidney cancer

Smart Communications	Title
SC81	Lack of accuracy of selection criteria in low-risk prostate cancer patients eligible for focal treatment
SC82	Medium term oncological outcomes in a large cohort of men treated with either focal- or hemi-ablation with HIFU for primary localized prostate cancer
SC83	Long term oncological outcomes of cryotherapy and HIFU in whole gland and first line treatment for localized prostate cancer
SC84	Cryotherapy for prostate cancer: Oncological and functional outcomes
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SC81 Lack of accuracy of selection criteria in low-risk prostate cancer patients eligible for focal treatment

M. Righetto, D. Modonutti, M. Mancini, F. Zattoni (*Padova*)

Aim of the study: Radical treatment for localised prostate cancer (PC) could overtreat many clinically non-significant cases. Focal ablative therapies, such as vascular-targeted photodynamic therapy (VTP), have been introduced for these cases. PC eligible for active surveillance (Gleason Score-GS $\leq 3+3$, prostate-specific antigen-PSA ≤ 10 ng/ml, clinical stage up to T2a) can be considered for focal therapy. The multifocal nature of PC and the inability of current imaging to identify accurately all the PC lesions has been postulated to negatively impact on focal therapy efficacy. We conducted a retrospective single-centre study on patients who underwent radical prostatectomy (RP) for low risk disease with the aim to evaluate the morphological and pathological nature of these PC, focusing on pathologies from biopsies and surgical specimens.
Materials and methods: 623 patients underwent RP between 01/2016 and 12/2018: 155/623 RP were conducted for low-risk PC as defined by the RP specimens. Statistical analysis was performed using the IBM SPSS Statistics.
Results: 155 patients had a low-risk PC diagnosis with pre-operative biopsy, 82 (53%) of these performed in our Institution. 86/155 (55%) patients had MRI. Median PSA value was $5,7 \pm 4,3$ ng/ml and PSA-density (PSAD) was $0,13 \pm 0,6$. There was no significant difference between prostate volume as detected by transrectal US or by MRI ($43,5 \pm 18,4$ vs $46,5 \pm 20$; $p > 0,05$). 50/155 patients (32%) could have been eligible for the PRIAS surveillance protocol and/or for focal therapy. Among these, 31 biopsies showed unilateral positive cores (62%), but none of these showed a single focus (25/31–81% diffuse positive cores and only 6/31–9% with 1 focus of ≥ 2 close positive cores plus distant unilateral cores). 19/31 patients (61%) had a MRI before biopsy, all with unilateral positivity: 32% with PI-RADS ≥ 4, 21% PI-RADS 3 and 47% PI-RADS < 3. Concordance between mpMRI and PC specimen was 26%. Considering final pathology on RP specimens, 16/31 (52%) showed a histological upgrading (2 GS $4+3$, 14 GS $3+4$). 14/31 (45%) cases were confirmed as unilateral with 5 of them (36%) multifocal. The main tumour had a median volume of $3 \pm 2,4$ cc. 7/14 (50%) were GS $3+3$ and only 5 of them were unifocal (total number of pts unilateral, unifocal, and final GS $3+3$: 5/31, 16%). Only one of these 5 pts showed a positive PI-RADS 3 MRI nodule, with a PSAD of 0,11.
Discussion: The selection for focal treatment of pts with low-risk PC, based on MRI or bioptic data, shows a poor correlation with final pathology results. Only 16% of pts would have been properly selected for focal treatment in our study. This data shows that there is a current lack of accuracy in clinical evaluation of low-risk PC pts really eligible for focal treatment. MRI does not seem to improve the accuracy of bioptic data, but did not show false positive results in the small subsets of pts with a real localised nodule of PC. There is a high need for a biomarker/imaging technique able to reliably identify focal localisations of PC.