

Choosing Best Candidates for Salvage Radical Prostatectomy: EAU guidelines-compliant vs non-compliant patients outcomes



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Objectives: Salvage radical prostatectomy (sRP) can represent a curative treatment for patients experiencing biochemical recurrence (BCR) after primary therapy. Accurate patient selection is paramount to maximize expected benefits of this procedure. EAU guidelines state that sRP candidates should have low comorbidities, pre-sRP PSA <10 ng/mL, pre-sRP biopsy Gleason Score (GS) ≤ 8 , no evidence of lymph-node or extra-nodal metastases and previous organ-confined disease. Histological and oncological results between patients compliant and non-compliant with these requirements were compared in this study.

Methods: We retrospectively selected 73 fully EAU-compliant (lower risk, Group A) and 236 non-EAU-compliant patients (higher risk, group B: missing at least one of the above-mentioned characteristics) from a dataset of 615 sRP

	EAU-compliant	NON EAU-compliant	p
n	73	236	
Age [y]	65.57 (61.17; 69.00)	66.91 (63.02; 71.13)	0.11
follow-up [y]	3.43 (2.26; 5.96)	3.12 (1.81; 4.92)	0.16
pre sRP PSA [ng/ml]	3.8 (2.5; 5.4)	5.0 (2.6; 9)	0.01
Lymphadenectomies	70%	88.70%	<0.01
pN1 at sRP	7.84%	23.50%	<0.01
pT2 at sRP	68.50%	35.90%	<0,01
sRP gleason (%)			
6	17.65	5.19	
7	73.53	38.68	
8	2.94	15.09	<0,01
9	4.41	40.57	
10	1.47	0.47	
Positive surgical margin	27%	43%	0.02
BCR-free at follow-up	64.40%	37.90%	<0.01
Alive at follow-up	94.52%	93.64%	0.78

performed between 2000 and 2016 at 18 tertiary referral centres. Clinical and histological data were registered before, during and after sRP. A follow up <6 months or unavailability of the data were exclusion criteria. Continuous variables were compared using Wilcoxon-Mann-Whitney test; differences in categorical variables were assessed by Chi-square or Fisher's exact tests.

Results: The two groups were similar considering median age at sRP (65.57 vs 66.91 years, $p=0.11$) and follow-up duration (3.43 vs 3.12 years, $p=0.16$). As expected, pre-salvage surgery PSA was significantly higher among higher risk patients (5.0 [IQR: 2.5-5.4] vs 3.8 [IQR 2.6 vs 9.0] ng/ml, $p=0.01$), as well as ASA score and GS distribution at confirmatory biopsy. In Group A vs Group B, respectively, organ-confined disease at sRP (pT2) was encountered in 68.5% vs 35.9% ($p<0,01$), lymph-node metastases in 7.8% vs 23.5% ($p<0,01$) and of GS ≥ 8 disease in 8.8% vs 56.1% ($p<0,01$). Positive surgical margins were more frequent in higher risk patients (43% vs 27%, $p=0,02$). Group A showed a nearly doubled BCR-free survival at last follow-up (64.4% vs 37.9%, $p>0,01$). Besides, no differences in survival were demonstrated yet: 94,5% vs 93,6% patients alive for Group A vs B, respectively.

Conclusions: Three years after sRP, 64.4% of men fully-compliant to EAU selection criteria (relatively low-risk disease) is still disease-free. On the grounds of these results, potentially-curative surgical salvage treatment should probably not be precluded upfront for accurately selected patients, in whom the expected oncological benefit should be weighed against non-negligible complication rates and potential functional problems. Large long-term series are needed to confirm sRP benefits and to enhance patient selection.