THE IMPACT OF PERSISTENTLY ELEVATED PSA LEVELS ON PROGRESSION AND SURVIVAL OF PATIENTS UNDERGOING CYTOREDUCTIVE RADICAL PROSTATECTOMY FOR OLIGOMETASTATIC PROSTATE CANCER

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Background

- Cytoreductive radical prostatectomy (cRP) represents an option in oligo-metastatic prostate cancer (mPCa). However, the optimal multi-modal strategy of these men is unknown also considering the lack of markers of disease aggressiveness.
- **We hypothesized that persistently elevated PSA levels after cRP might impact on outcomes and might guide post- operative treatments**

Methods

- We evaluated 152 men who received cRP plus extended pelvic lymph node dissection (ePLND) for oligo-mPCa at four referral centres. Of these, **90 (59%) men received neo-adjuvant treatment and were excluded.**
- This resulted in **62 patients treated with cRP without neoadjuvant ADT**. Patients were eligible for cRP if they had: (1) completely resectable PCa; (2) max 5 osseous metastases; (3) no gross retroperitoneal nodal metastases; (4) no pelvic nodal metastases >3 cm; (5) no visceral metastases.
- **PSA persistence after cRP was defined as >0.1 ng/ml at 6 weeks after cRP.** Clinical recurrence (CR) was defined as additional metastases during follow- up.
- **Kaplan-Maier analyses** assessed time to CR and CSM overall and after stratification according to PSA persistence. **Multivariable Cox regression models** tested the impact of PSA at 6 weeks on CR and CSM after adjusting for grade group (≤8 vs 9-10), stage (pT3a vs ≥pT3b; pN0 vs pN1) and adjuvant ADT.

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Baseline patients characteristics

Variable		Overall	No Persistance (n=29, 47%)	PSA Persistance (n=33, 53%)	p value
PSA at RP	Median	11.9	8.3	32.9	<0.001
	IQR	6.2-33	5-10.9	12-48	
Months FUP	Median	32.5	32	29	0.5
	IQR	18-58	17.2-72	18-47	
Gleason Score	<=7	21 (33.9)	9 (34.6)	8 (27.6)	0.4
	8	21 (33.9)	10 (38.5)	8 (27.6)	
	9-10	20 (32.3)	7 (26.9)	13 (44.8)	
pN stage	pN0	25 (40.3)	13 (50)	7 (24.1)	0.08
	pN1	37 (59.7)	13 (50)	22 (75.9)	
Mets burden	Low	55 (88.7)	24 (92.3)	24 (82.8)	0.5
	High	7 (11.3)	2 (7.7)	5 (17.2)	
pT stage	pT2c	13 (21)	9 (34.6)	0 (0)	0.002
	pT3a	16 (25.8)	8 (30.8)	6 (20.7)	
	pT3b	29 (46.8)	8 (30.8)	20 (69)	
	pT4	3 (4.8)	1 (3.8)	2 (6.9)	
Adjuvant therapy	No	17 (27.4)	12 (46.2)	2 (6.9)	0.003
	Yes	44 (71)	14 (53.8)	26 (89.7)	

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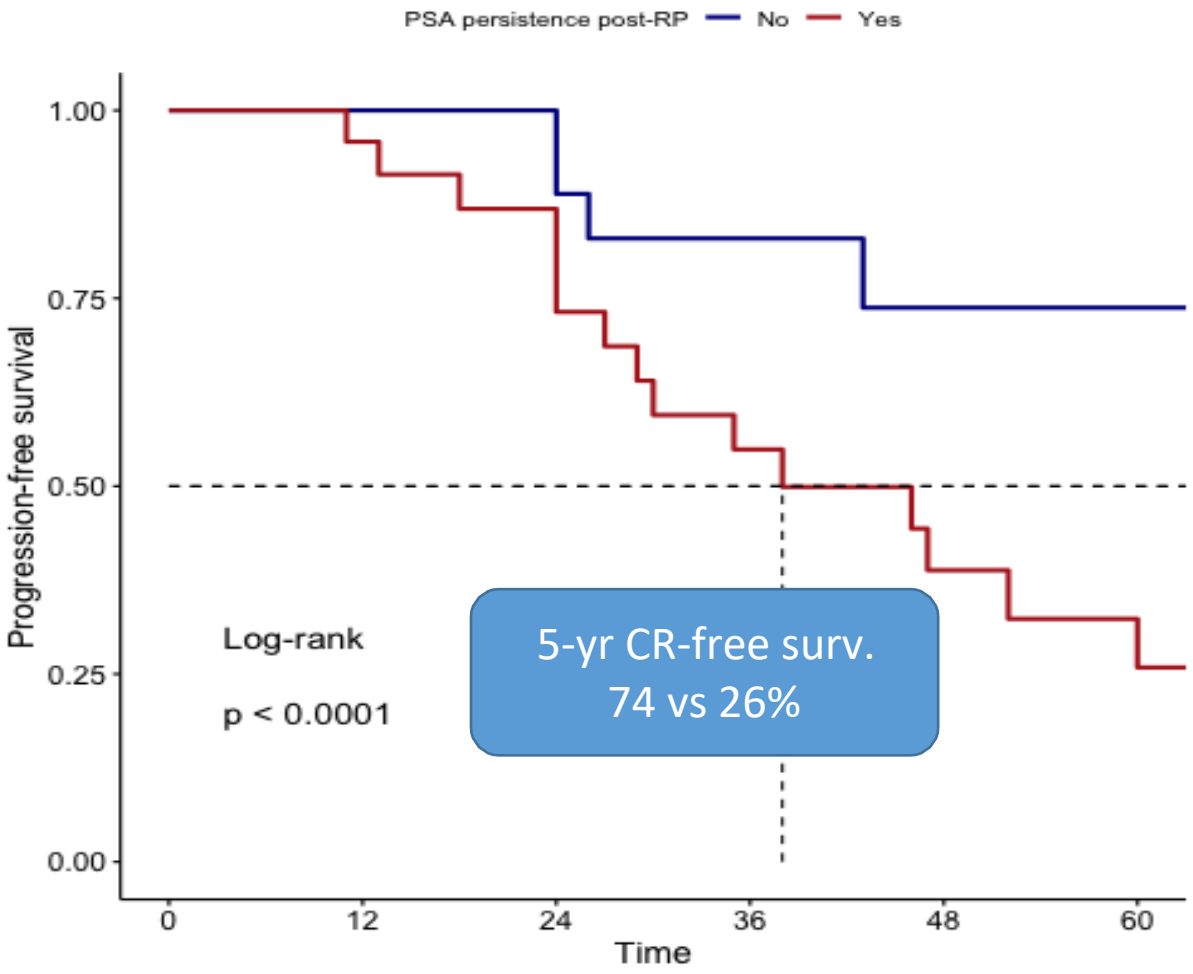
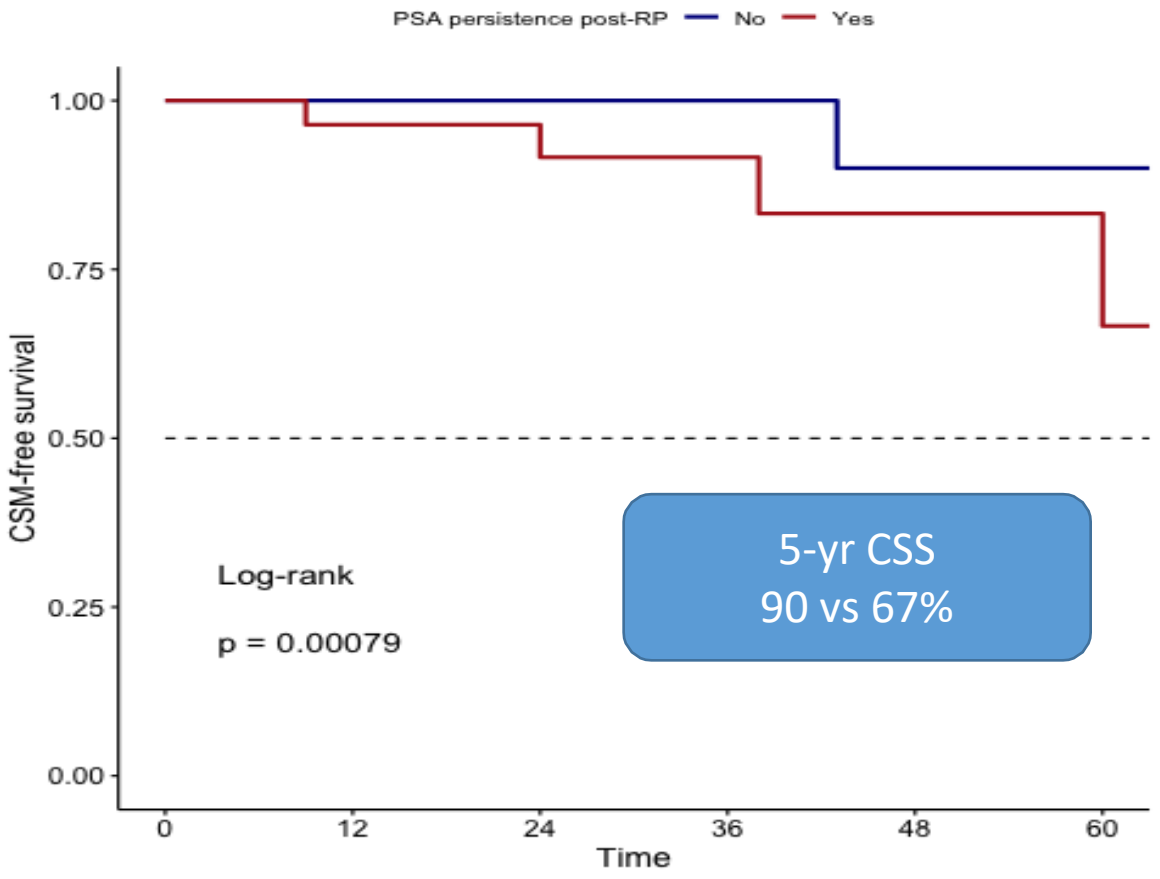
Kaplan-Meier reporting progression-free-survival



Kaplan-Meier reporting CSM-free-survival



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Multivariable Cox regression model predicting Clinical progression

		Multivariable			
		HR	95% CI		P value
PSA at 6 weeks		1.02	1.01	1.04	0.006
Adjuvant Tp	Yes	2.09	0.60	7.27	0.2
pT	pT3a	Ref.			
	≥pT3b	1.99	0.93	4.25	0.07
pN	pN0	Ref.			
	pN1	0.75	0.24	2.35	0.6
Met burden	Low	Ref.			
	High	2.66	1.01	7.03	0.048
GS	< 7	Ref.			
	8	0.54	0.20	1.45	0.2
	9-10	1.01	0.33	3.05	0.9

Multivariable Cox regression model predicting Cancer-related Mortality

		Multivariable			
		HR	95% CI		P value
PSA at 6 weeks		1.05	1.01	1.09	0.044
Adjuvant Tp	Yes	3.87	0.36	41.6	0.1
pT	pT3a	Ref.			
	≥pT3b	1.63	0.39	6.81	0.4
pN	pN0	Ref.			
	pN1	1.38+09	0.00	Inf	0.9
Met burden	Low	Ref.			
	High	4.45	0.46	42.85	0.1
GS	< 7	Ref.			
	8	2.76	0.01	3.97	0.3
	9-10	1.56	0.15	15.5	0.7

Conclusion

- Surgery **without neoadjuvant therapies** achieved an **initial biochemical response in roughly 50% of men receiving cRP**.

- **The first PSA value at 6 weeks after cRP represents an important predictor** of CR and CSM in oligo-mPCa patients who did not receive previous neoadjuvant ADT.

- **Patients with PSA persistence should be counselled about their unfavourable prognosis** and exposed to more extensive multimodal treatments.