

PERFORMANCE OF PET SCAN IN MEN TREATED WITH SALVAGE LYMPH NODE DISSECTION FOR RECURRENT PROSTATE CANCER: CORRELATION BETWEEN EACH AREA OF DISSECTION AND PREOPERATIVE IMAGING.

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- ❑ **225 patients** diagnosed with up to two nodal recurrences of PCa after radical prostatectomy (RP) detected by ^{11}C -Choline or ^{68}Ga -PSMA PET scan. All patients were treated with sLND.
- ❑ The removed lymph nodes were labelled according to the anatomic region, both in the pelvis (**obturator, external iliac, hypogastric** and **common iliac**) and in the retroperitoneum (**paracaval, paraortic, interaortocaval** and **presacral**).

Statistics

- We described sensitivity, specificity, PPV and NPV of preoperative imaging, stratified by PET tracer.
- Multivariable analysis assessed predictors of false negative imaging.

RESULTS

- ❑ Overall, 127 (**56%**) and 98 (**44%**) patients received ^{11}C -Choline vs. ^{68}Ga -PSMA PET scan, respectively.
- ❑ A total of 189 (**84%**) and 59 (**26%**) men had imaging suggestive for **pelvic** and **retroperitoneal relapse from PCa**, with no differences between the two PET tracers (both $p \geq 0.08$).
- ❑ **Median number of nodes removed** was **24**. At **final pathology**, 150 (**67%**) and 92 (**41%**) men had **nodal involvement in the pelvis** and **retroperitoneum**, respectively.

Performance characteristics of PET scan in predicting nodal invasion in 225 patients treated with salvage lymph node dissection, stratified by PET tracer.

	Overall		¹¹ C-Choline		⁶⁸ Ga-PSMA	
	Pelvis	Retro	Pelvis	Retro	Pelvis	Retro
Sensitivity (%)	40	30	35	24	50	27
Specificity (%)	94	98	93	98	93	99
PPV (%)	48	63	48	75	44	44
NPV (%)	91	90	88	85	95	97

Multivariable logistic regression predicting false negative PET scan.

Variable	OR	95% CI	P
PSA at sLND	1.02	1.00, 1.04	0.084
Number of positive spots at PET scan			
0-1	Ref.	-	
2+	2.14	0.58, 7.90	0.3
ISUP grade at RP			
≤4	Ref.	-	
≥5	0.91	0.19, 4.33	0.9
Number of nodes removed during sLND	1.01	0.98, 1.04	0.6
ADT administration at PET scan			
No	Ref.	-	
Yes	3.69	1.59, 8.04	0.006
PET tracer			
¹¹ C-Choline	Ref.	-	
⁶⁸ Ga-PSMA	0.78	0.26, 1.29	0.4

CONCLUSIONS

- ❑ In patients treated with SLND, the sensitivity of preoperative PET scan is limited, and the risk of missing clinically significant disease remains non-negligible.
- ❑ Our results suggest that PSMA tracer has slightly higher sensitivity in the pelvis as compared to ¹¹C-Choline PET scan. Still, men receiving ADT at preoperative PET scan are at increased risk of underestimation and should be considered for more extended dissection.