



Accuracy of MSKCC nomogram in predicting lymph node invasion in prostate cancer - a single centre experience in Hong Kong

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Objective

- Evaluate accuracy of Memorial Sloan Kettering Cancer Centre (MSKCC) nomogram in predicting lymph node invasion (LNI) in patients undergoing radical prostatectomy (RP) and pelvic lymph node dissection (PLND) for prostate cancer
- Identify an optimal cut off value for PLND

Method

- All patients who underwent RP and PLND for prostate cancer in a single centre from 2011 to 2022 were retrospectively reviewed
- Standard template was used for PLND
- The accuracy of MSKCC nomogram in predicting LNI was assessed using area under curve (AUC) of receiver operating characteristic (ROC) analysis.
- The sensitivity, specificity and positive predictive value (PPV) of different cut off values in deciding PLND were assessed

Results

- A total of 138 patients underwent RP + PLND
- 19 patients had lymph node invasion identified at final pathology
- Mean number of lymph node removal: 11.7

Test/ MSKCC LNI%	pN staging	Disease		Sensitivity	Specificity	PPV	NPV
		0	1				
Cut off value above 5%	Neg	37	0	100.00%	31.09%	18.81%	100.00%
	Pos	82	19				
Cut off value above 6%	Neg	42	1	94.74%	35.29%	18.95%	97.67%
	Pos	77	18				
Cut off value above 7%	Neg	49	2	89.47%	41.18%	19.54%	96.08%
	Pos	70	17				
Cut off value above 8%	Neg	54	3	84.21%	45.38%	19.75%	94.74%
	Pos	65	16				
Cut off value above 9%	Neg	57	5	73.68%	47.90%	18.42%	91.94%
	Pos	62	14				
Cut off value above 10%	Neg	59	5	73.68%	49.58%	18.92%	92.19%
	Pos	60	14				

Fig.1 Table showing relation between MSKCC probability of lymph node invasion & pN staging at final pathology

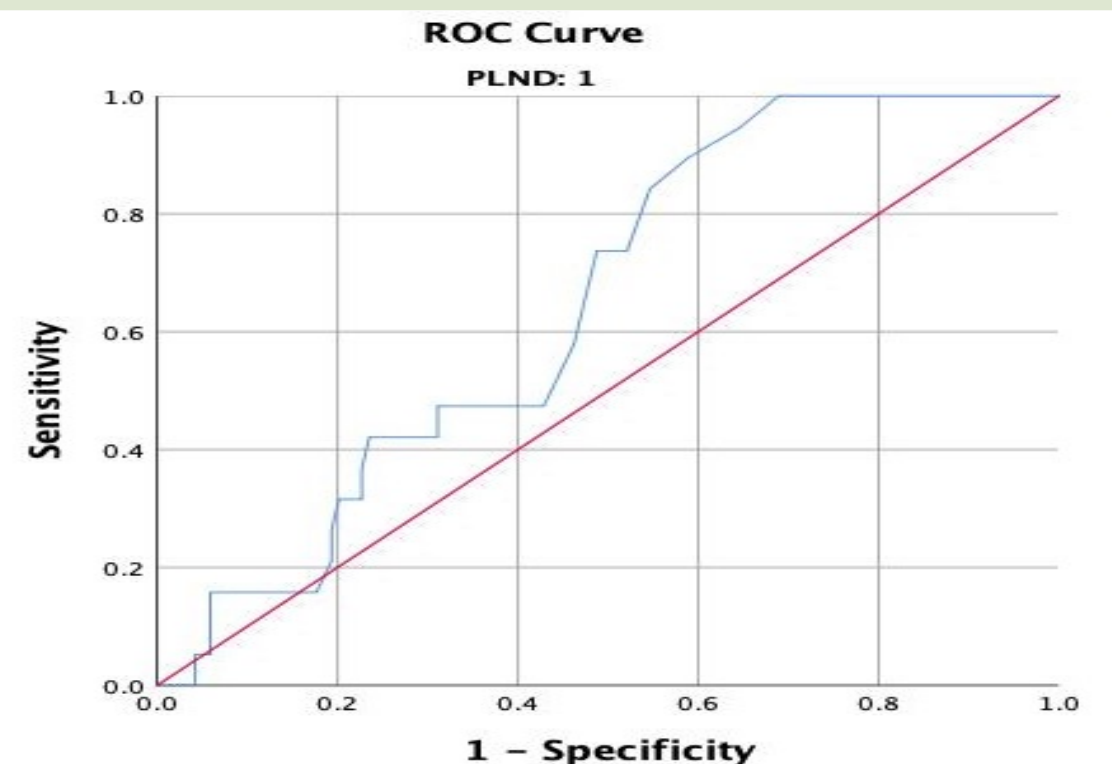


Fig.2 ROC curve showing area under curve (AUC: 0.645)

Conclusion

- Cut off value at 6% for PLND reduces unnecessary PLND with acceptable sensitivity in identifying patients with LNI.
- Accuracy of MSKCC nomogram in predicting LNI in our cohort was fair only
- There is a need of creating a nomogram based on patients in our locality