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## Territory-wide Propensity-Score-Matched Analysis of Major Cardiovascular Events (MACE) and Renal Outcomes After Partial (PN) Versus Radical Nephrectomy (RN) in Hong Kong

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### Background:

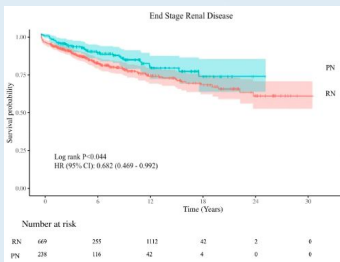
RCC, metabolic risk factors, End Stage Renal Disease (ESRD) and Major Cardiovascular Event (MACE) all contributes to mortality.

### Study Method:

238 PN and 669 RN for adult RCC retrieved from Clinical Data Analysis and Reporting System (CDARDS), using propensity-score-matching (1:3) ratio

### Primary outcome:

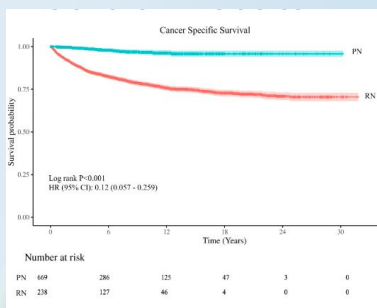
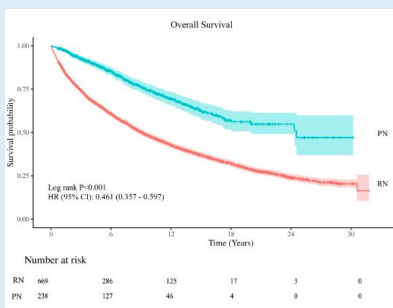
- PN significantly lower risk of ESRD ( $p=0.044$ )
- NO significant difference in MACE incidence ( $p>0.05$ )



Variable	Total (n = 907)	RN (n = 669)	PN (n = 238)	P	SMD
Age, Mean $\pm$ SD	63.87 $\pm$ 11.19	64.04 $\pm$ 11.36	63.39 $\pm$ 10.72	0.438	-0.061
Pre eGFR, Mean $\pm$ SD	80.70 $\pm$ 28.22	80.20 $\pm$ 28.55	82.09 $\pm$ 24.27	0.321	0.078
Sex, n (%)				0.990	
F	316 (34.84)	233 (34.83)	83 (34.87)		0.001
M	591 (65.16)	436 (65.17)	155 (65.13)		-0.001
Hypertension, n (%)				0.259	
No	516 (56.89)	388 (58.00)	128 (53.78)		-0.085
Yes	391 (43.11)	281 (42.00)	110 (46.22)		0.085
DM, n (%)				0.296	
No	671 (73.98)	501 (74.89)	170 (71.43)		-0.077
Yes	236 (26.02)	168 (25.11)	69 (28.57)		0.077
Hyperlipidemia, n (%)				0.630	
No	756 (83.35)	560 (83.71)	196 (82.35)		-0.036
Yes	151 (16.65)	109 (16.29)	42 (17.65)		0.036
Other Malignancies, n (%)				0.995	
No	743 (81.92)	548 (81.91)	195 (81.93)		-0.001
Yes	164 (18.08)	121 (18.09)	43 (18.07)		0.001
CLD, n (%)				0.355	
No	892 (98.35)	660 (98.65)	232 (97.48)		-0.075
Yes	15 (1.65)	9 (1.35)	6 (2.52)		0.075
Peptic ulcer, n (%)				0.749	
No	861 (94.93)	636 (95.07)	225 (94.54)		-0.023
Yes	46 (5.07)	33 (4.93)	13 (5.46)		0.023

### Secondary outcome:

- PN showed superior overall survival (OS) ( $p<0.004$ )
- PN showed superior cancer-specific survival (CSS) ( $p<0.001$ )
- Post-operative eGFR reduction  $>40\%$  at 12th month independently predicted a worse OS



### Discussion:

PN has no significant difference in MACE compared to RN despite better renal function preservation

In RCC patients,  
**Oncological** > metabolic concern  
when choosing between RN and PN

