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Feasibility of Omitting Outer Renorrhaphy During Robotic Partial Nephrectomy

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Feasibility of omitting outer (cortical) renorrhaphy during robotic partial nephrectomy - A multi-institutional analysis

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Feasibility of omitting outer (cortical) renorrhaphy during robotic partial nephrectomy - A multi-institutional analysis

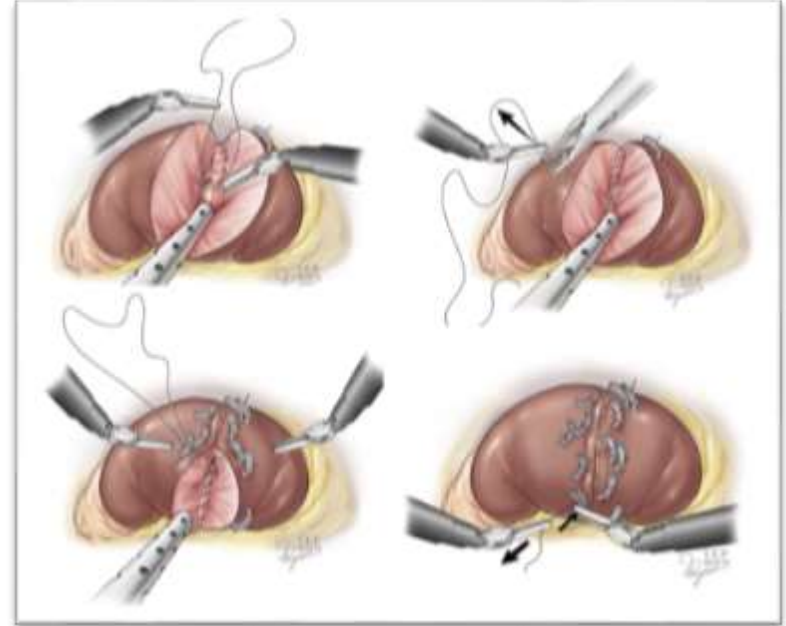
Introduction

- Vattikuti Collective Quality Initiative (VCQI):
 - 41 surgeons
 - 14 centers
 - 9 countries
- Reconstruction technique after robotic partial nephrectomy (RPN) has recently been shown to be a modifiable factor with possible impacts on ischemia time, postoperative bleeding, renal function, and incidence of pseudoaneurysms after surgery.



Feasibility of omitting outer (cortical) renorrhaphy during robotic partial nephrectomy - A multi-institutional analysis

- Recent literature comparing single versus double layer (cortical) renorrhaphy stems primarily from single institution studies.
- There are currently no randomized trials.
- Objective: to evaluate the feasibility of omitting cortical renorrhaphy in a multi-institutional setting.

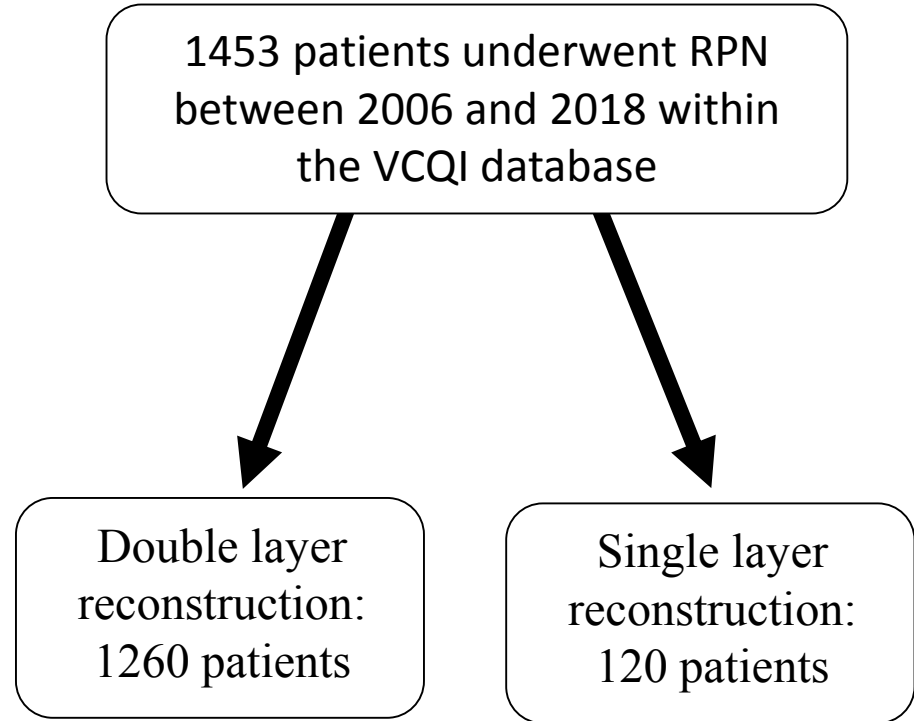


*Standard double layer renorrhaphy technique

Credit: Laydner H, Kaouk JH. Robotic partial nephrectomy: The new horizon. *Arab J Urol.* 2012;10(1):2-9

Methods

- Inverse probability of treatment weighting (IPTW) was performed to minimize selection bias by adjusting for several preoperative factors.
- Firth correction was applied to the data model to account for center-specific practices.
- Perioperative outcomes were compared between matched cohorts.



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Variable	Double Layer	Single Layer	p value
Operative time, minutes, median (IQR)	168 (140-203)	162 (140-202)	0.2
Ischemia time, minutes, median (IQR)	18 (14-22)	17 (13-20)	0.7
Estimated blood loss, mL, median (IQR)	100 (50-200)	100 (50-200)	0.6
% drop in eGFR, ml/min/1.73m ² , median (IQR)	7.3 (16.9-1.4)	10.4 (17.5-3.6)	0.9
Intraoperative complications, %	7.4	8.9	0.6
Postoperative Clavien grade ≥ 3 complications, %	1.0	2.8	0.2
Positive surgical margin, %	2.2	3.2	0.6
Hospital stay, days, median (IQR)	3 (2-4)	2 (2-4)	0.4
Need for angioembolization within 1 year, %	0.7	1.4	0.4

Conclusion:

Omission of cortical renorrhaphy did not significantly improve operative or ischemia time; however, it also had no adverse effect on perioperative outcomes after RPN in a multi-institutional setting.

- Won best poster prize at EAU Barcelona
- Being presented at AUA annual meeting, Chicago as we speak.