



American
Urological
Association

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AUA VIRTUAL EXPERIENCE

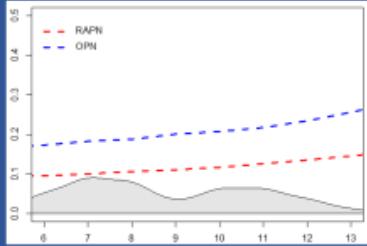


The IRON study: Investigation of Robot-assisted versus Open Nephron-sparing surgery

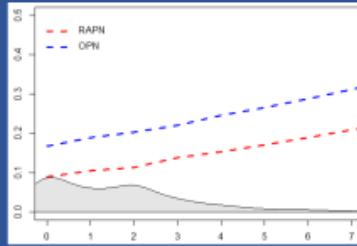
Results

PROBABILITY OF COMPLICATIONS

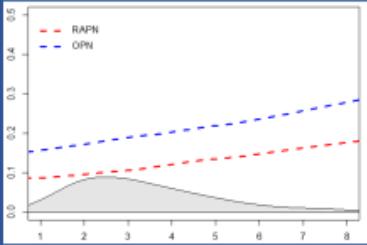
PADUA score



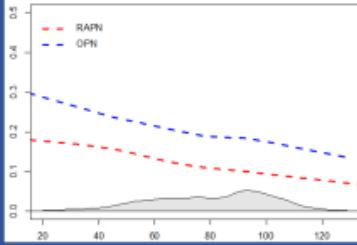
Charlson comorbidity index



Clinical size (cm)



Estimated glomerular filtration rate



COMPLICATIONS, ONCOLOGIC AND FUNCTIONAL OUTCOMES

Outcomes	OPN	RAPN	RAPN vs. OPN OR - EST - HR (95% CI)	p-value
Morbidity and complications				
Intraoperative complications	99 (9.3)	139 (5.7)	0.39 (0.22-0.68)	<0.001
Overall complications	355 (33)	435 (18)	0.29 (0.12-0.60)	<0.001
Clavien-Dindo complication ≥ 2	215 (20)	279 (12)	0.37 (0.24-0.57)	<0.001
Clavien-Dindo complication ≥ 3	65 (6.1)	97 (4.0)	0.29 (0.12-0.60)	<0.001
Estimated blood loss (mL)	180 (100-350)	150 (100-300)	-140 (-163 to -115)	<0.001
Operative time (min)	120 (100-163)	150 (120-200)	+31 (+26 to +36)	<0.001
Length of stay (d)	6 (5-7)	4 (3-5)	-2 (-2 to -1)	<0.001
Haemorrhagic complication	96 (9.0)	155 (6.4)	0.43 (0.25-0.72)	<0.01
Urinary leakage	49 (4.6)	21 (0.8)	0.05 (0.01-0.3)	<0.01
Functional outcomes				
Ischemia time (min)	15 (8-21)	16 (11-22)	+4.3 (+3 to +5)	<0.001
Post-operative eGFR (mL/min/1.73 m ²)	78 (63-93)	76 (60-89)	-6 (-8 to -4)	<0.001
1-yr eGFR (mL/min/1.73 m ²)	68 (55-87)	71 (56-88)	-1 (-2 to +1)	0.5
Pathologic outcomes				
Pathological size (mm)	3 (2.1-4)	3 (2-4.1)	0.7 (-0.2 to 1.7)	0.1
Malignancy	834 (78)	1920 (80)	1.06 (0.77-1.45)	0.7
pT3-pT4	51 (4.7)	107 (4.4)	0.90 (0.46-1.76)	0.8
G3-G4	191 (18)	550 (23)	0.83 (0.58-1.20)	0.3
Positive surgical margins	55 (5.1)	103 (4.3)	0.53 (0.27-0.99)	0.05
5-yr oncologic outcomes				
Local recurrence	23 (2.1)	40 (1.6)	1.88 (0.97-3.63)	0.06
Systemic progression	48 (4.5)	44 (1.8)	0.83 (0.49-1.41)	0.5
Clinical progression	71 (6.6)	79 (3.2)	1.00 (0.67-1.49)	0.9
Cancer-specific mortality	26 (2.4)	20 (0.8)	1.01 (0.41-2.42)	0.9



Conclusions

- Morbidity is lower in RAPN vs. OPN. Conversely, renal function is inferior after RAPN vs. OPN;
- No differences on oncologic outcomes are observed between RAPN vs. OPN;
- The very large study cohort, the thorough clinical data collection, the relatively long follow-up and the inclusion of contemporary patients are unique strengths of the study