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Comparison of Clinical Outcomes between Open and Laparoscopic Bladder Cuff Excision (BCE) in Laparoscopic Radical Nephroureterectomy (RNU): a

10-year retrospective clinical study

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Aim:

- ❑ Radical nephroureterectomy (RNU) represents the primary treatment for non-metastatic upper tract urothelial carcinoma (UTUC)
- ❑ Our institution conducted a thorough analysis of bladder cuff excision (BCE) techniques during laparoscopic RNU to provide valuable insights into their efficacy and impact on patient care.

Methodology:

- ❑ Retrospective study
- ❑ Patients who underwent laparoscopic RNU for UTUC without distant metastasis at a teaching hospital between 2015 and 2024
- ❑ Patients were categorized based on the **BCE approach (open vs. laparoscopic)**, with demographic and tumour data compared against clinical outcomes.

Results:

- ❑ Patients who underwent laparoscopic BCE (n=45) exhibited **significantly shorter hospital stays** (-1.670 days; p=0.0248)
- ❑ **Reduced operation times** (-31.930 minutes; p=0.0359) compared to those undergoing open BCE (n=58).
- ❑ Laparoscopic BCE also showed **lower urinary tract recurrence rates** (OR = 0.122; p=0.0071).
- ❑ However, subgroup analysis based on lower ureter involvement by urothelial carcinoma did not yield statistically significant differences

Conclusion:

- ❑ Bladder cuff excision methods within RNU for UTUC highlights the benefits of laparoscopic surgery, including
 - ❑ Shortened hospital stays
 - ❑ Decreased operation times, and
 - ❑ Improved oncological outcomes characterized by lower cancer recurrence rates.

Table 1: Clinical Outcomes

	Open BCE	Laparoscopic BCE	Odds ratio (95% CI) / Difference (95% CI)	p-value
Count	58	45	N/A	N/A
Age (Years; Mean, SD)	69.28 (11.92)	72.07 (12.13)	2.790 (-1.944, 7.524)	0.245
Female Sex (count, %)	20 (34.48)	22 (48.89)	1.818 (0.819, 4.032)	0.142
Unplanned 28-day readmission (count, %)	7 (12.07)	9 (20.00)	1.821 (0.621, 5.342)	0.275
Length of stay (days; Mean, SD)	8.87 (3.24)	7.20 (4.20)	-1.670 (-3.124, -0.216)	0.0248

Table 2: Surgical Outcomes

	Open BCE	Laparoscopic BCE	Odds ratio (95% CI) / Difference (95% CI)	p-value
Count	58	45	N/A	N/A
Operation time (minutes, SD)	310.26 (73.48)	278.33 (78.19)	-31.930 (-61.710, -2.150)	0.0359
Positive surgical margin (count, %)	7 (12.07)	2 (4.44)	0.339 (0.0669, 1.72)	0.191
Blood loss (mL, SD)	354.69 (258.52)	322.86 (306.38)	-31.830 (-142.320, 78.660)	0.569

Table 3: Oncological outcome

	Open BCE	Laparoscopic BCE	Odds ratio (95% CI)	p-value
Count	58	45	N/A	N/A
Urinary tract recurrence (count, %)	16 (27.59)	2 (4.44)	0.122 (0.0264, 0.564)	0.0071
Distant metastasis (count, %)	11 (18.97)	5 (11.11)	0.534 (0.171, 1.667)	0.280
Transitional cell carcinoma related death (count, %)	10 (17.24)	3 (6.67)	0.343 (0.0884, 1.329)	0.122