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Endoscopic management versus radical nephroureterectomy for localized upper tract urothelial carcinoma, A retrospective study on clinical outcomes

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Objective: The efficacy of endoscopic kidney sparing surgery (eKSS) for low-risk upper tract urothelial carcinoma UTUC is not fully defined. We aim to compare oncological outcomes of eKSS versus radical nephroureterectomy (RNU).

Patients and Methods: This is a retrospective analysis of low-risk UTUC treated with RNU and eKSS in a local cohort. Patients with locally advanced disease, high-grade histopathology and histological subtype were excluded. Survival outcomes, baseline characteristics (age, gender, ECOG status, ASA classification, baseline eGFR, comorbidities) and tumor features (size, location, past/concurrent bladder cancer) were assessed.

Results: A total of 10 eKSS and 101 RNU cases were included, Kaplan-Meier analyses showed no significant differences in DFS($p=0.467$), IVRS ($p=0.116$), OS ($p=0.618$), or CSS ($p=0.309$).

- Similar follow-up duration (median 42.3 vs 55.2 months, $p=0.088$)
- Groups were comparable in age (median 75 vs 71 years, $p=0.087$), gender ($p=0.69$), ECOG ($p=0.12$), ASA ($p=0.42$), baseline eGFR (60.9 vs 60.6, $p=0.58$), and comorbidities (e.g., hypertension, DM).
- KSS group had smaller mean tumor size (15.4 ± 12.5 vs 30 ± 27.7 mm, $p=0.01$), fewer > 2 cm tumors (10% vs 74%, $p=0.01$), and more ureteric tumour (kidney only 10% vs 44%, ureter only 90% vs 41%, kidney and ureter 0% vs 15%, $p=0.02$).
- Past/concurrent bladder cancer rates were similar ($p=0.33$ and 0.17).

Conclusion: eKSS appears comparable to RNU in terms of survival for selected low-risk UTUC cases, supporting its role as a viable alternative.

Figure 1 – Survival outcomes on Kaplan Meier analysis for endoscopic KSS versus RNU (blue line = eKSS, redline = RNU)

