



Urology

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What Factors Influence the Outcome of Ureteral Reimplantation?

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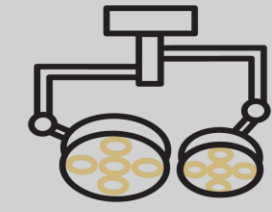
Background

→ Ureteral reimplantation, ureteroneocystostomy, is a procedure to correct distal ureter obstruction

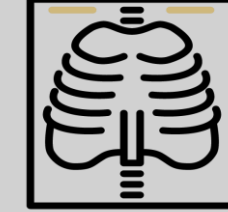
→ Common applications for ureteral reimplantation^{1, 2}:



Trauma



Iatrogenic Injury



Radiation

→ Frailty recognized to influence the outcomes of urologic surgery⁴

→ Surgical robot increasingly used:

- better visualization
- easier access under pubic bone³

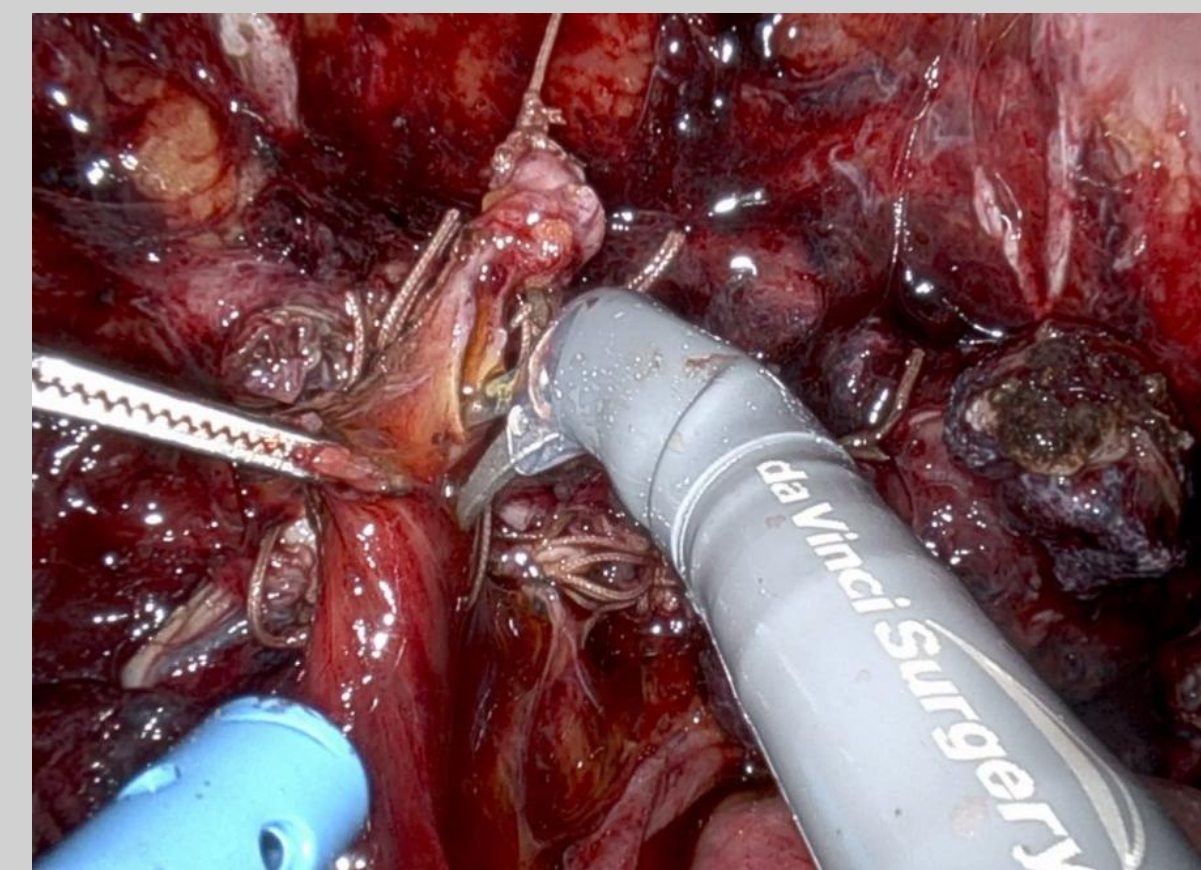


Image 1: Robotic Ureteral Reimplantation

Objective

The purpose of this study was to examine the impact of pre-defined factors on outcomes of ureteral reimplantation.

Methods

- Retrospective review over 20 years (2003-2025)
- Pre-defined independent variables: age, ureteral rest, frailty index⁶, robotic vs. other approaches, smoking, radiation, and use of psoas hitch or Boari flap
- Outcome measures: “surgical success,” need for revision, hospital length-of-stay(LOS), readmission, and thirty-day complications
- Surgical success: asymptomatic, hardware-free, no reintervention
- Statistical analyses: linear modeling, logistic regression, descriptive statistics, Fisher’s Exact Test, and ANOVA

Results

Table 1. Patient Characteristics

| Variable | Number of Patients |
|--------------------|---|
| Median Age (Range) | 51 (16-81) |
| Approach (%) | Robotic: 47 (43%) Open: 60 (55%) Laparoscopic: 2 (2%) |
| Sex (%) | Female: 78 (72%) Male: 31 (28%) |

Robotic Outcomes

Surgical Success

- 88% for robotic vs 81% for non-robotic (p=0.38)

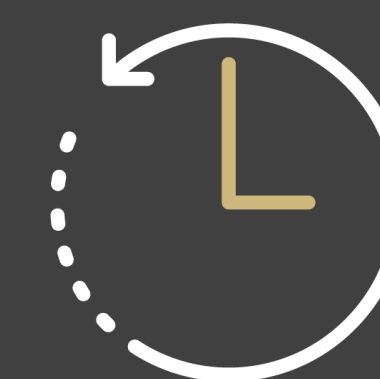
Complications (n= 36)

- Robotic: 10, 4 ≥ Clavien Grade III
- Non- Robotic: 26, 11 ≥ Clavien Grade III



Surgical Success

- 64% for radiated vs. 91% for non-radiated (p=0.02)



Predictors of Hospital Length of Stay

- Age (Estimate: 0.08±0.04, p=0.04)
- Frailty Index (Estimate: 1.39±0.48, p=0.005)



Predictors of 30-Day Complications

- Frailty Index (OR: 1.67, 95%CI: 1.11-2.64)



No factors examined predicted the need for readmission, PCN/stent-free status, or surgical revision.

Conclusion

A history of radiation was associated with decreased rates of surgical success. Frailty was associated with increased hospital length of stay and 30-Day complications. Use of the robot was not shown to impact our outcomes of interest. These findings may guide patient counseling and management.

References

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