

# Robot Assisted Radical Prostatectomy in Solid Organ Transplantation: Surgical Technique, Complications, and Oncologic Outcomes

Kyle M. Rose, MD MS, Karan K. Arora MD, Kassem S. Faraj MD, Derek Scott BS, Erik P. Castle MD FACS, Paul E. Andrews MD, Robert G. Ferrigni MD  
**Mayo Clinic, Phoenix, AZ**

- In-situ organ transplantation may present surgical and perioperative challenges robot assisted radical prostatectomy (RARP)
- Methods
  - Retrospective review 2003-2019
  - Demographics, Perioperative and Oncologic outcomes
- Results
  - 2,230 RARPs performed, 20 with organ transplants
  - Median follow up 55 months
  - Complications:
    - Four total, all within 30 days
      - Two Liver transplant patients: perirectal hematoma and thromboembolic event
      - No fascial dehiscences
    - All patients had undetectable PSA postoperatively
      - One patient with biochemical recurrence
  - Conclusion:
    - RARP is technically feasible in solid organ transplant patients with organ-confined prostate cancer
    - Immunosuppression can be safely continued perioperatively

	Kidney N=10	Liver N=7	Heart N=3
Age (years)	65 (63-69)	54 (50-64)	64 (64-68)
ASA Score	3 (3-3)	3 (2.5-3)	3 (3-3)
Time from transplant to RARP (months)	50 (33-125)	50 (16-65)	72 (62-81)
Preoperative PSA (ng/dL)	5.1 (4.6-8.6)	6.7 (5.3-8.2)	5.1 (4.8-5.3)
Duration of procedure (minutes)	241 (180-248)	255 (217-286)	235 (223-247)
EBL (mL)	100 (88-100)	163 (113-194)	113 (94-131)
Prostate Mass (grams)	36 (34-42)	38 (30-46)	32 (30.5-33.5)
No. Gleason score on final pathology			
3 + 3	4	1	1
3 + 4	4	3	1
4+3	1	3	0
4 + 4	1	0	0
Complications			
<30 days	2	1	0
>30 days	0	1	0

