# (MP57-11) SINGLE-PORT ROBOTIC PARTIAL AND RADICAL NEPHRECTOMIES FOR RENAL CORTICAL TUMORS: INITIAL CLINCAL EXPERIENCE

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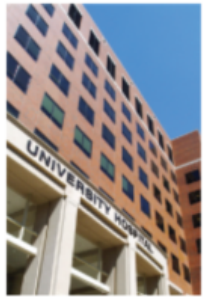
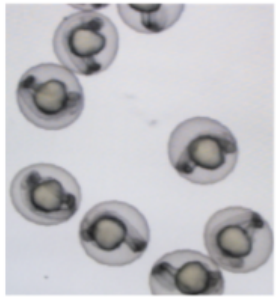
UAB HEALTH SYSTEM





## Introduction

- The FDA recently approved the da Vinci® SP robotic for urologic procedures
- Limited data on its feasibility and safety
- We aim to describe our institution's initial experience with the SP robotic system with radical (RN) and partial nephrectomy (PN)

## Methods

- Retrospective review of patients undergoing PN and RN
- All PNs were performed off-clamp

## Results

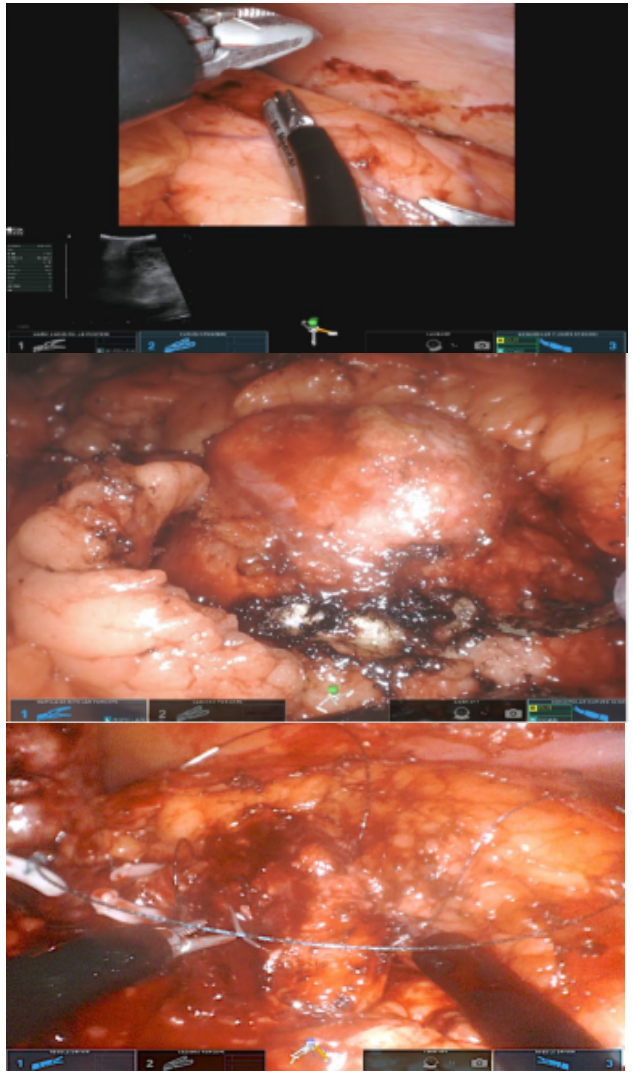
| Parameter | Partial Nephrectomies (N = 13) | Radical Nephrectomies (N = 3) |
|---|---|---|
| Age at Surgery (yr.), mean±SD (range) | 58.6±13.9 (38-81) | 61.0±1.7 (59-62) |
| Size on CT (cm), mean±SD (range) | 3.4±0.9 (2.1-4.8) | 3.6±1.8 (1.5-5.0) |
| Location | | |
| Upper Pole | 9 (69.2%) | 1 (33.3%) |
| Interpolar | 2 (15.3%) | 1 (33.3%) |
| Lower Pole | 2 (15.4%) | 1 (33.3%) |
| Endophytic | 5 (38.5%) | 2 (67.7%) |
| Approach | | |
| Retroperitoneal | 7 (53.8%) | 1 (33.3%) |
| Transperitoneal | 6 (46.1%) | 2 (66.7%) |
| Conversion to Open | 1 (7.7%) | 0 (0%) |
| Estimated blood loss (ml), median (IQR) | 200 (50-800) | 50 (50-400) |
| Operative time (min), mean±SD (range) | 176.1±64.0 (121-349) | 176.3±73.8 (117-259) |
| Immediate postoperative complications (Clavien-Dindo Complication ≥ 2) | 3(23.1%) | 2 (66.7%) |
| Length of hospitalization (days) | 1.9±1.3 (1-5) | 3.3±1.2 (2-4) |
| Surgical pathology | | |
| Clear cell RCC | 8 (61.5%) | 1 (33.3%) |
| Papillary RCC | 3 (23.0%) | 1 (33.3%) |
| Chromophobe RCC | 1 (7.7%) | 1 (33.3%) |
| Angiomyolipoma | 1 (7.7%) | 0 (0%) |
| Tumor size (cm), mean±SD (range) | 3.3±0.9 (2.2-4.9) | 3.6±1.9 (1.5-5.2) |
| Pathologic Stage | | |
| pT1a | 5 (41.7%) | 1 (33.3%) |
| pT1b | 1 (8.3%) | 2 (66.7%) |
| pT2 | 1 (8.3%) | 0 (0%) |
| pT3 | 5 (41.7%) | 0 (0%) |

**Figure 1**: Transperitoneal off-clamp partial nephrectomy using the SP surgical system.

a) Renal mass identification with ultrasound.

b) Renal mass enucleation.

c) Tissue compression renorrhaphy



## Conclusion

- SP surgical system can feasibly perform off-clamp PNx and RNx in a select subset of patients.
- Further studies are needed to determine its safety and efficacy