

## AB011. 216. Da Vinci Xi robotic partial nephrectomy for complex renal mass

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**Background:** Complex renal mass may preclude a minimally invasive approach to nephron sparing surgery in some patients. We describe our technique with da Vinci Xi robotic platform, illustrated with video, of robotic partial nephrectomy for challenging renal tumours, including large, hilar and endophytic tumours.

**Methods:** Between July 2016 and October 2018, 15 out of 40 patients were found to have complex renal mass with RENAL nephrometry score of 9 or more. Patient details were collected for age, gender, American Society of Anesthesiologists score, tumour side, number, size and location. Outcomes measures included operative time, estimated blood loss, warm ischaemia time (WIT), serum creatinine before and after surgery, length of hospital stay, transfusion rate, operative and 30-day complications.

We describe our technique of robotic-assisted partial nephrectomy (RPN) for complex cases in video lecture.

**Results:** Twelve out of 15 patients with complex tumour underwent Xi robotic partial nephrectomy successfully without complications. Three patients required open conversion after complete hilar dissection. Hilar clamping was utilized with a mean warm ischemia time of 30 minutes (range, 25–45 minutes). Mean blood loss was 250 mL (range, 150–450 mL). Histopathology confirmed clear cell renal cell carcinoma (n=8), papillary renal cell cancer (n=4), chromophobe renal cell carcinoma (n=2) and hybrid oncocyctic tumour (n=1). All patients had negative surgical margins. Mean index tumour size was 3.5 cm (range, 2.5–7 cm). Mean hospital stay was 4 days.

**Conclusions:** Xi robotic platform facilitates tumour resection and renal reconstruction for challenging cases, offering a minimally invasive surgical option for select patients with complex tumours who might otherwise require open surgery. Robotic partial nephrectomy is a safe and feasible approach for select patients with complex renal tumours.

**Keywords:** Kidney cancer; laparoscopy; partial nephrectomy; robotics; technique

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