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## Feasibility and safety of early renal hilar control in total nephrectomy for large renal tumour with retroperitoneoscopy followed by planned conversion-to-open: an illustration of technique and a case series of perioperative outcomes



WONG, Ho Ming Chris, WONG, Ka Wing, LI, Cheuk Man James, NGO, Chang Chung  
Urology Team, Department of Surgery, Pamela Youde Nethersole Eastern Hospital

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### Introduction

Large renal tumours posed challenges to total nephrectomy with minimally invasive surgical (MIS) approaches. However, open approach still had its limitations.

We are describing a hybrid technique of

open radical nephrectomy with initial hilar control achieved via retroperitoneoscopy, and presenting the perioperative outcomes of a series of large solid renal tumour (>7cm) performed with this approach.

### 01 Patients and methods

A retrospective review was performed for cases of open nephrectomy carried out from 2021-2023 for solid renal masses greater than 7cm in size (on computed tomography scans).

Operations started with retroperitoneoscopy.

After hilar control was achieved, subsequently it was converted to open (which was planned pre-operatively) and the rest of the steps were performed.

Intraoperative and perioperative outcomes were reported.

Retrospective review of database

Planned retroperitoneoscopy followed by planned to open

Collection and retrieval of data

### 03 Results

There were 4 cases performed with this hybrid technique

- The mean tumour size: 12cm
- The mean operation time: 206 minutes
- The mean number of pack cells transfused: 1.75
- The mean estimated blood loss: 1341mL
- All the cases achieved clear margin in slide review
- No operative complications reported
- The mean length of stay: 6.75 days
- 3 out of the 4 cases had a postoperative surveillance cross-sectional imaging with no recurrence

### 02 Procedure

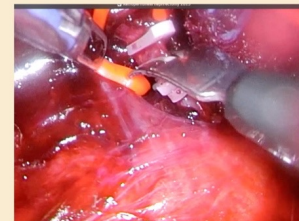
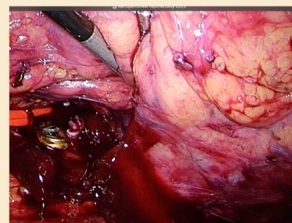


Case illustration: a left kidney upper pole tumour measuring 12 x 11 cm



- Patient was put in right lateral position
- Port placement as follow: first incision over left mid axillary line 3cm above iliac crest. Retroperitoneum space created with finger dissection followed with inflating a glove balloon
- Another two 12mm and a 5mm assistant port were further inserted.

- Gerota's fascia was entered followed dissection to hilum was made
- Pulsation observed for the identification of hilar structures.



- Renal artery was dissected, slung, and transected between hemoclips

- Further dissection of kidney from surrounding was attempted as much as possible
- Open conversion was carried out for the rest of the procedure

### 04 Conclusion

A hybrid approach of radical nephrectomy with retroperitoneoscopic hilar control followed by converting-to-open is safe and feasible for large renal tumour unamenable with MIS.