

## Pathological Review on Open Surgeries in Cancer Patients

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### Abstract

Technically challenging, repeat renal surgery has a high morbidity rate. For the treatment of a patient with a history of VHL and multiple previous renal surgeries on the affected kidney, we describe a novel surgical strategy: a salvage robotic transmesenteric off-clamp partial nephrectomy. This procedure is performed to treat a renal cell carcinoma. The specimen was identified as clear cell RCC, Fuhrman Grade 3, with negative surgical margins after pathological examination. The patient recovered quickly and without post-operative complications. In select patients with a significant history of renal surgery and favorable anatomy, this strategy is a viable and safe alternative.

**Keywords:** Partial nephrectomy; Renal cell carcinoma; Robotics; Surgical approach

### Introduction

The nature of the disease, many patients requires multiple partial nephrectomies (PN) throughout their lifetime to limit oncologic risk while preserving renal function. Hereditary renal tumors, such as those seen in von Hippel-Lindau (VHL), are typically managed with active surveillance followed by partial nephrectomy (PN) when tumors reach a size threshold of 3 cm. Due to adhesions and fibrosis from previous procedures, each kidney operation becomes more difficult inherently. In this report, we describe an innovative surgical approach: a robotic transmesenteric off-clamp PN to treat a renal cell carcinoma in a patient who has had a history of VHL and multiple previous kidney surgeries.

### Case presentation

A 50-year-old man with a history of bilateral renal cell carcinoma (RCC) and VHL was the patient. Three left PNs and one right PN were significant in his past surgical history. With an estimated glomerular filtration rate (eGFR) of 44 mL/min and a pre-operative creatinine of 1.75 mg/dL, his renal function was indicative of stage 3B chronic kidney disease [1]. The patient has remained under close observation, receiving serial MRI scans every 12 to 24 months. A single left renal mass measuring 3.4 cm, up from 2.7 cm the year before, and too many renal cysts to count were found in the patient's most recent MRI report. The plan was to use a robotic approach to resect a single, exophytic, solid tumor that was larger than 3 cm [2].

Using a Veress needle, the patient was successfully placed in the lateral decubitus position. A chevron incision and bilateral flank incisions were discovered when the patient's previous abdominal incisions were examined. Under direct vision, the abdomen was entered. Before placing robotic trocars along the rectus's lateral edge, significant adhesions were lysed through laparoscopy [3]. At the umbilicus, a 15 mm assistant port and a 5 mm Airseal (CONMED Corporation, Utica, NY) port without adhesions were positioned 6 cm apart. After docking the da Vinci Xi robot from Intuitive Surgical Inc. in Sunnyvale, CA, instruments were installed. We identified the descending colon as well as the renal mass medial to it protruding the colon mesentery upon careful examination of the abdominal cavity. The mass was identified as an anterior solid mass by intraoperative ultrasound. This strong mass was the most front part of the kidney and encompassed by pimples. On a specific surveille of the ipsilateral kidney, no other solid renal masses were found [4]. Given the exophytic idea of the renal growth as well as the thick fibrotic response from earlier medical procedures, we chose to make a mesenteric window to uncover the exophytic renal

growth. A look at the mesenchyme revealed no large blood vessels in the area above the tumor. To prevent thermal damage, the colon's edge was chosen [5].

We saw the renal mass and its surrounding parenchyma once the mesentery was opened. The renal capsule was then scored using ultrasound guidance. The choice for an off-clasp resection was made.

The tumor was enucleated away from the normal renal parenchyma after the capsule was cut around the circumference. The tumor and the resection bed were evaluated to make sure that the entire renal mass was cut out completely. The estimated volume of blood lost during this off-clamp resection was 100 cm<sup>3</sup>. A 3-0 barbed suture was used for the inner layer of the renal repair, and a 2-0 polyglactin was used to close the renal capsule in a two-layer repair. An EndoCatch bag from Covidien, Dublin, Ireland, was used to extract the tumor.

The specimen was diagnosed as clear cell RCC, Fuhrman Grade 3, with negative surgical margins after pathological examination. On post-operative day 2, the Foley catheter was removed, and on post-operative day 3, the Jackson-Pratt drain was removed because there was no increase in output. He was released to home on post-usable day 3, after all post-employable achievement for release were met. Notably, his serum creatinine was 1.57 mg/dL, which was slightly lower than his creatinine before surgery, which was 1.75 mg/dL. In this study, we report on a transmesenteric robotic PN performed on a patient with VHL who had undergone multiple bilateral open PNs in the past. We tried to limit unnecessary dissection given his extensive surgical history [6].

A transmesenteric approach without hilar clamping seemed feasible and appealing because the exophytic renal mass was protruding into an area of the colon mesentery devoid of large vessels.

### Discussion

As the degree of fibrosis can make identification and dissection challenging, salvage PN (PN after two prior PN) is a technically

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demanding procedure with a historically high rate of complication and renal loss<sup>2</sup>. Minimizing dissection of critical structures like the renal hilum is frequently beneficial in these cases. In any event, assembling the kidney is frequently troublesome, as one can experience fibrotic response to the stomach wall, earlier entry point locales, psoas muscles and stomach. These locations were completely avoided in this instance. This is the first case in which a transmesenteric approach has been described for a PN, despite the fact that the transmesenteric approach is part of the repertoire of urologists and has been used by urologists performing pyeloplasty procedures<sup>3</sup>.

Robotic nephrectomies have similar functional and oncologic outcomes to open PN, but they also produce less blood, require a shorter hospital stay, and have a lower rate of postoperative complications<sup>4</sup>. Off-clamp resection is also a technique that we frequently use on patients who have hereditary cancer syndromes. Off-clamp PN has been shown to be safe even in complex renal tumors.<sup>5</sup> In this instance, we chose not to access the renal hilum and instead performed an off-clamp resection through the mesentery. However, the hilum should still be dissected even in off-clamp cases for deeper renal tumors or those that are close to it.

Knowledge of abdominal and retroperitoneal anatomy and training in minimally invasive surgery are required for the robotic transmesenteric PN. Additionally, if the surgeon needs access to the renal hilum for vascular clamping, or if the patient has a highly vascular mesentery, this method may not be an option.

## Conclusion

We portray an off-clamp transmesenteric mechanical PN in a patient with various earlier open renal medical procedures. In a patient with a significant history of renal surgeries and favorable anatomy, this method was technically and oncologically sound and allowed for rapid recuperation.

## References

1. Hangaard H, Gögenur M, Tvilling M, Gögenur I (2018) The effect of time from diagnosis to surgery on oncological outcomes in patients undergoing surgery for colon cancer: a systematic review. *Eur J Surg Oncol* 44: 1479-1485.
2. Nathalie L, Sun J, Gondara L, Diocee R, Speers C, et al. (2020) Impact of pathologic complete response on survival after neoadjuvant chemotherapy in early-stage breast cancer: a population-based analysis. *J Canc Res Clin Oncol* 146: 529-536.
3. James J B, Michael J R, William J M, Weidong K (2011) Association between time to initiation of adjuvant chemotherapy and survival in colorectal cancer: a systematic review and meta-analysis. *Jama* 305: 2335-2342.
4. Kristiina H, Kirsi C, Martin J, Hannele T, Kerttu T (2016) Summative assessment of clinical practice of student nurses: A review of the literature. *Int J Nurs Stud* 53: 308-319.
5. Jacob S, Antoni R, Georgina V L, Ana A, Jacques G, et al. (2017) Pembrolizumab versus ipilimumab for advanced melanoma: final overall survival results of a multicentre, randomised, open-label phase 3 study (KEYNOTE-006). *Lancet* 390: 1853-1862.
6. Hand H (2006) Promoting effective teaching and learning in the clinical setting. *Nurs Stand* 20: 55-65.