

# **Robotic nephro-ureterectomy**

## **Robotic Nephro-ureterectomy Video**

### **Who is suitable for robotic-assisted nephro-ureterectomy?**

Robotic-assisted nephro-ureterectomy may be an option for patients with:

- A urothelial kidney cancer arising from the renal pelvis
- A urothelial tumour arising from the lining of the ureter

### **What are the advantages of robotic-assisted nephro-ureterectomy?.**

Robotic-assisted nephro-ureterectomy offers both the surgeon and the patient various benefits when compared to conventional laparoscopic or open surgery. The entire operation can be performed with a minimally invasive approach without the need to make a large incision or make a cut in the bladder to remove the end of the ureter.

The patient benefits from:

- Smaller incisions
- Less blood loss
- A shorter hospital stay and faster recovery time

The surgeon benefits from:

- Greatly enhanced, high definition 3D vision inside the body
- Small and precise instruments that allow a greater range of movements than the human hand

### **How is a robotic-assisted nephro-ureterectomy performed?**

- The patient is placed under general anaesthetic for the duration of the procedure, which lasts around 3 hours
- Between 3-5 small keyhole incisions are made in the abdomen, through which the surgical instrument and camera are inserted
- Carbon dioxide is used to inflate the patient's abdomen, creating space required for the surgeon to view and access the affected kidney
- The affected kidney is removed along with the entire length of the ureter
- The end of the ureter is carefully disconnected from the bladder and the small hole in the bladder is meticulously sutured to ensure it is water-tight
- The affected kidney is carefully removed from the body
- Carbon dioxide is released and the robotic instruments are removed
- Incisions are sealed carefully, to reduce the chance of hernia or scarring

## **What to expect after a robotic-assisted nephro-ureterectomy?**

- You may remain in hospital for 2-3 nights following your procedure
- There may be some pain or discomfort which will be managed with medication
- You will be encouraged to sit out of bed and walk around as well as perform deep-breathing exercises to minimize the chance of pneumonia or blood clots in the legs or lungs (DVT/PE)
- Uncommon complications include:
  - Leakage of urine into the abdomen from the bladder incision
  - Damage to major blood vessels or other organs during surgery
  - Incisional hernia (usually where there are problems with wound healing)

## **Procedure outcomes**

Most patients are able to return to their normal activities within 2-3 weeks following a robotic-assisted partial nephrectomy. Strenuous activities and heavy lifting should be avoided for 6 weeks following surgery to minimize the chance of bleeding or hernia.

**Written by [Dr. Shekib Shahbaz](#) and [Dr. Tony de Sousa](#)**

Veccia, A., Antonelli, A., Francavilla, S., Simeone, C., Guruli, G., Zargar, H., Perdoni, S., Ferro, M., Carrieri, G., Hampton, L. J., Porpiglia, F., Autorino, R., (2020), Robotic versus other nephroureterectomy techniques: a systematic review and meta-analysis of over 87,000 cases, World Journal of Urology, 38, [\[https://link.springer.com/article/10.1007/s00345-019-03020-1\]](https://link.springer.com/article/10.1007/s00345-019-03020-1), accessed 27/02/21.

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