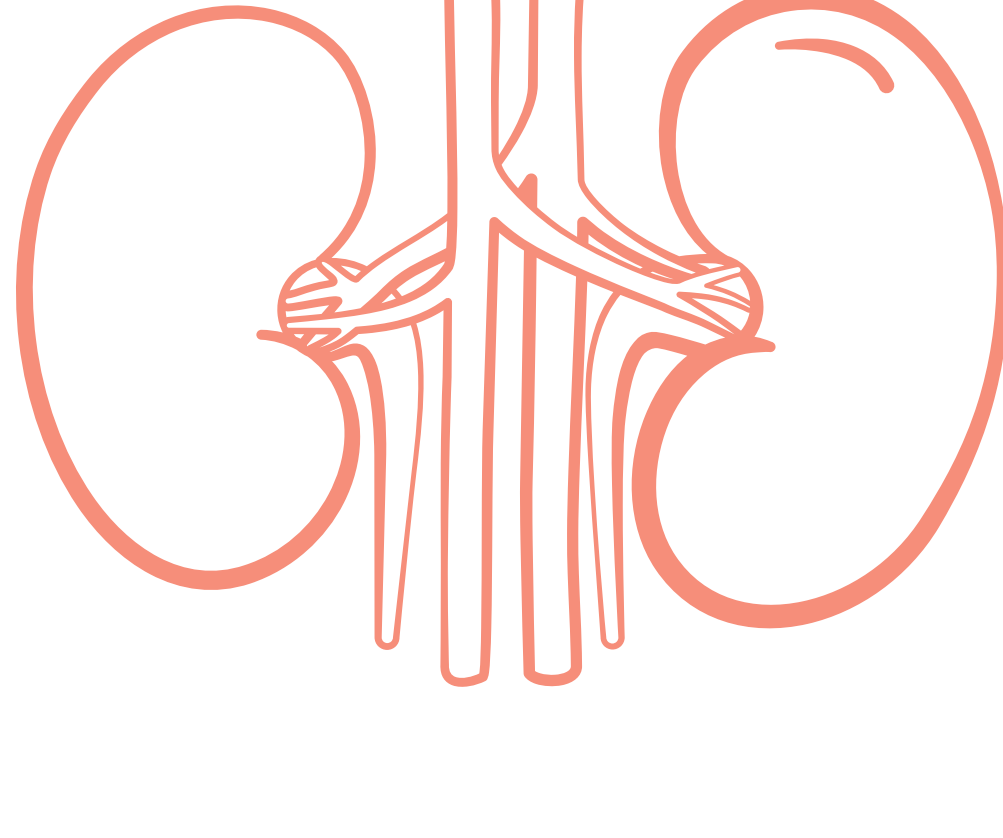




## THE SILENT KILLER: UNDERSTANDING THE IMPACT OF KIDNEY CANCER

### KIDNEY CANCER<sup>(1)</sup>

also known as renal cell carcinoma, can be a major source of concern for individuals on the Indian subcontinent.



Certain risk factors, such as smoking, obesity, high blood pressure, and chemical exposure, may all contribute to the development of kidney cancer.<sup>(2)</sup>

The projected incidence of Renal Cell Carcinoma in India is<sup>(3)</sup>

**2/100,000** population in Males

**1/100,000** population in Females

### METHODS FOR DIAGNOSIS<sup>(2,3)</sup>

Regular preventive health check-ups are vital for early detection and prevention of kidney cancer by identifying warning signs and risk factors, even when symptoms are not apparent in the early stages.



Imaging tests such as ultrasound, CT scan and MRI



Clinical evaluation of signs & symptoms

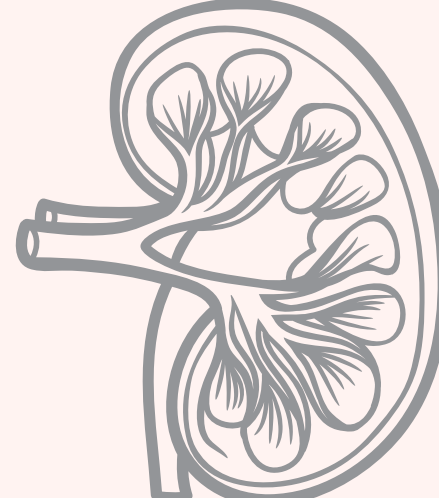


Preventive health check-ups

### HOW IS KIDNEY CANCER MANAGED?<sup>(4)</sup>

Surgery is the primary treatment approach for early-stage kidney cancer. Surgery for kidney cancer can be categorized into different types based on the extent of the disease and the goals of treatment

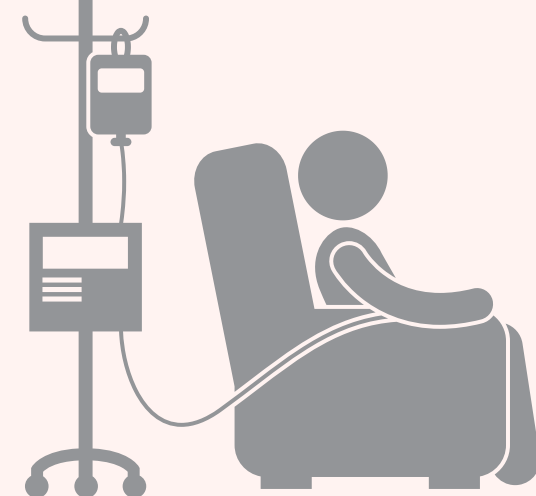
#### SURGERY: RADICAL NEPHRECTOMY



Radical Nephrectomy: Removal of the affected kidney and surrounding tissues. It is usually done for larger or more advanced tumors, either alone or as an adjunct to other procedures or treatments.

While radical nephrectomy has its benefits, it should be noted that removing the entire kidney can affect overall kidney function.

#### SURGERY: PARTIAL NEPHRECTOMY



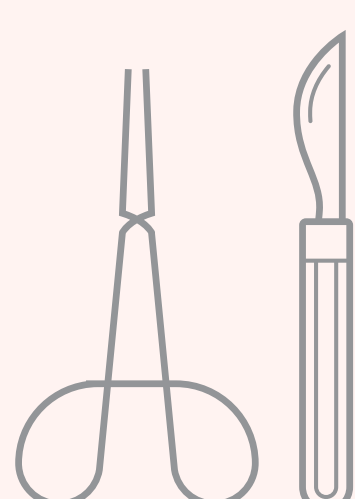
Partial Nephrectomy: Removal of the tumor and a small portion of the kidney, preserving healthy tissue.

Key points about Partial Nephrectomy:

- Kidney function preservation
- Reduced risk of chronic kidney disease
- Lower risk of long-term complications and need for dialysis.

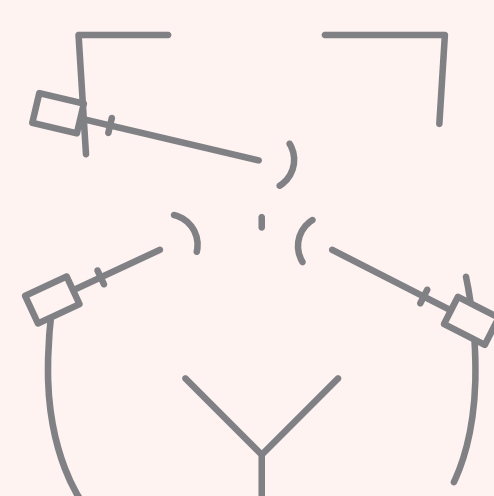
In most early-stage tumors, partial nephrectomy is the preferred option due to the above-mentioned reasons.

Surgery for kidney cancer can be done in three ways :



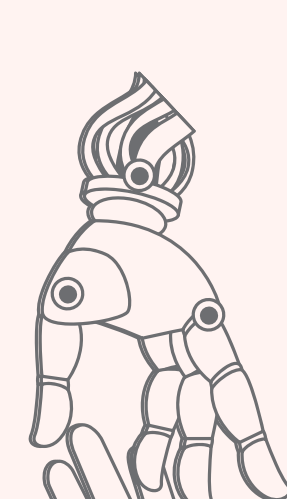
#### 1. OPEN SURGERY

Open surgery is a traditional surgical approach for the treatment of kidney cancer. It involves making a larger incision in the abdomen or flank area to access the kidney and perform the necessary steps.



#### 2. LAPAROSCOPY

It is a minimally invasive surgical technique that uses small incisions. It can be used for various kidney cancer procedures, including radical nephrectomy, partial nephrectomy, and lymph node dissection. However, not all patients or tumor characteristics (size or location) are suitable for laparoscopic surgery.



#### 3. ROBOTIC SURGERY

Robotic partial nephrectomy is rapidly becoming the preferred treatment for early-stage kidney cancers due to its exceptional accuracy, reduced risk of complications, and improved preservation of kidney function.

Key points about robotic surgery:

- Precision and Accuracy,
- Reduced blood loss,
- Less postoperative pain,
- Shorter hospital stays, and
- Faster recovery times.



#### COMBINED TREATMENT OPTIONS

Combining surgery with specific immunotherapy or targeted therapy medications can reduce the risk of cancer recurrence following the surgical procedure for late-stage cancer patients.

A team of healthcare specialists, including surgeons, medical oncologists, and radiation oncologists work together to create a personalized treatment plan that maximizes the patient's chances of success.

### SYMPTOMS OF KIDNEY CANCER<sup>(4,5)</sup>

Kidney cancer is usually asymptomatic in the initial stages. This means that individuals may not usually experience any noticeable symptoms. However, as the cancer progresses, symptoms may eventually appear. Preventive health check-ups identify warning signs even when symptoms are not apparent early.



Blood in urine (hematuria)



Lower back or side pain



Loss of appetite and weight loss



Preventive health check-ups

### PRIMARY PREVENTION OF KIDNEY CANCER<sup>(4,5)</sup>



Quit smoking



Maintain a healthy weight



Control blood pressure



Regular check-ups

#### References

<sup>1</sup> Chow, W. H., Dong, L. M., & Divecha, S. S. (2010). Epidemiology and risk factors for kidney cancer. *Nature Reviews Urology*, 2(5), 245-257. <sup>2</sup> Linehan, W. M., & Rathmell, W. K. (2012, November). Kidney cancer. In *Urologic Oncology: Seminars and Original Investigations* (Vol. 30, No. 6, pp. 948-951). Elsevier. <sup>3</sup> Linehan, W. M. (2010). Molecular diagnosis and therapy of kidney cancer. *Annual review of medicine*, 61, 329-343. <sup>4</sup> Henriksen, K. J., & Chang, A. (2020, January). The importance of nephropathology in kidney cancer. In *Seminars in Nephrology* (Vol. 40, No. 1, pp. 69-75). WB Saunders. <sup>5</sup> Tahbaz, B. (2018). Prevention of kidney cancer incidence and recurrence: lifestyle, medication and nutrition. *Current opinion in urology*, 28(1), 62-73.

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