

Facing Kidney Surgery?

Learn about minimally invasive
da Vinci® Surgery

The Condition:

Kidney Cancer

Your kidneys are two, fist-sized organs located behind the abdomen on each side of your spine. Kidneys produce urine, which is then stored in your bladder until it is emptied. By producing urine, kidneys remove toxic by-products and excess fluids from your body. This process helps to maintain a critical balance of salt, potassium and acid.

There are many conditions that can affect your kidneys, including kidney cancer. Each year, 208,500 people are diagnosed with kidney cancer worldwide. It is most common in North American countries and least common in Asian and African regions.

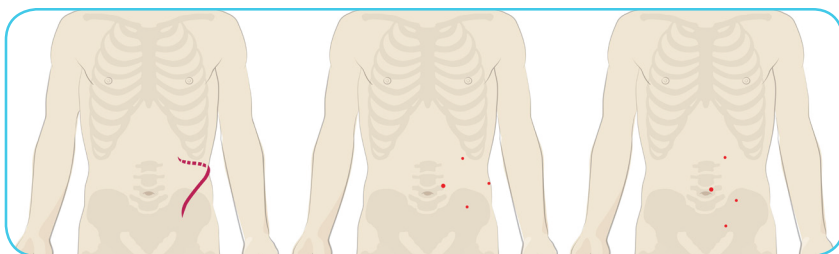
Kidney cancer is more common in men, smokers, people over age 40 and people who are obese. Fortunately, with early diagnosis and treatment, kidney cancer can be cured. If found early, the survival rate can be as high as 80%.

Treatments & Surgical Options

Kidney cancer is often resistant to non-invasive treatments like radiation and chemotherapy. Ablation therapies such as cryoablation and radiofrequency ablation may be an option. Ablation uses extreme temperatures in an effort to destroy cancer cells.

Surgery to remove your kidney is known as a nephrectomy. When surgeons remove only the tumor and leave the healthy portion of your kidney, it's called a partial nephrectomy. Surgery is often performed using an open approach, which requires a large incision. Open surgery allows doctors to see and touch your organs as they operate. With minimally invasive surgery (laparoscopy), your surgeon operates through a few small incisions with long-handled surgical instruments and a camera to guide him/her during the procedure.

da Vinci Surgery is another minimally invasive surgical option for patients facing partial nephrectomy. Surgeons make a few small incisions - similar to traditional laparoscopy. The *da Vinci* System features a magnified 3D HD vision system and wristed instruments that bend and rotate far greater than the human wrist.



Open Surgery
Incision

Laparoscopic
Incisions*

da Vinci Surgery
Incisions*

*In certain cases, your doctor may need to remove the entire kidney. If so, he/she will enlarge one incision for removal.

***da Vinci* Surgery:**

A Minimally Invasive Surgical Option

da Vinci enables your surgeon to operate with enhanced vision, precision, dexterity and control. *da Vinci* uses the latest in surgical and robotics technologies and is beneficial for performing complex surgery.

If you have been told you need kidney surgery, you may be a candidate for minimally invasive *da Vinci* Partial Nephrectomy. As a result of *da Vinci* technology, *da Vinci* Partial Nephrectomy offers the following potential benefits:

- › Precise removal of cancerous tissue & precise kidney reconstruction
- › Excellent chance of preserving the kidney, where indicated
- › Low rate of operative complications
- › Short hospital stay

As a result of *da Vinci* technology, *da Vinci* Partial Nephrectomy offers the following potential benefits compared to traditional laparoscopy:

- › Shorter operation
- › Shorter warm ischemic time (shorter is better for kidney function)
- › Less blood loss
- › Shorter hospital stay



Risks & Considerations Related to Partial Nephrectomy & *da Vinci* Surgery:

Potential risks of any partial nephrectomy procedure include:

- Urine leak
- Internal bleeding
- Injury to surrounding organs

In addition to the above risks, there are risks related to minimally invasive surgery, including *da Vinci* Partial Nephrectomy, such as hernia (bulging tissue/organ) at incision site.