

Kidney Cancer: Surgery



Surgery is the most common treatment for kidney cancer. The goal is to take out the tumor or tumors. Sometimes the entire kidney is removed. Nearby lymph nodes might be taken out, too.

When might surgery be used to treat kidney cancer?

Your healthcare provider may advise surgery to treat your kidney cancer if:

- **You are healthy enough to have surgery.** Your healthcare provider will only advise surgery if they expect you to be able to recover from it.
- **The tumor is small.** In this case, a **partial nephrectomy** might be done. This allows you to keep some kidney function. Only the part of the kidney that contains the tumor and some kidney tissue surrounding the tumor is taken out. This surgery is done if you have only one small tumor in one kidney. It may also be done if the tumor is larger, but you have cancer in both kidneys or you only have one kidney. The benefit is that you keep part of your kidney. The risk is that there's a chance some cancer cells will be left behind.
- **The tumor is large but is only in your kidney.** The type of surgery you need is based on how big the tumor is and where it is.
 - One choice is a **simple nephrectomy**. This is surgery to take out the entire kidney.
 - Or your healthcare provider may advise a **radical nephrectomy**. This is where the whole kidney, the adrenal gland (attached to the top of the kidney with the cancer), and nearby fatty tissues are removed. The surgeon might not remove the adrenal gland if it looks normal on imaging tests or the cancer is not high risk. . Nearby lymph nodes may also be removed in a procedure called **lymph node dissection**. They are removed when the provider can feel or see the enlarged lymph nodes on imaging tests done before surgery. This is done because cancer tends to travel to the nodes first. Taking them out may help keep cancer from spreading to other parts of your body. And testing these lymph nodes helps figure out the stage of the cancer. This is important in deciding if other treatments are needed after surgery.
- **You have kidney cancer that has spread to only one other area.** Your healthcare provider may suggest a **radical nephrectomy** and removal of the tumors in other parts of your body. This may not cure the cancer. But it can help ease symptoms, like pressure, pain, or bleeding.
- **You have symptoms.** You may have pain, pressure, or bleeding from tumors that have spread. Your healthcare provider might suggest surgery to remove those tumors. This is done to ease symptoms. It doesn't cure the cancer. You may hear it called palliative surgery.

Types of surgery

Kidney cancer surgery may be done in many ways. The type of surgery done depends on how big the tumor is and where it is in the kidney:

- **Open surgery.** This is done through a large cut (incision) made in the skin, fat, and muscle over the belly (abdomen). Or the incision might be made on your side, below your ribs, or your back. One of your lower ribs may need to be taken out to reach the kidney. The surgery is then done through this incision.
- **Minimally invasive surgery:**
 - **Laparoscopy.** This type of surgery is done through many small incisions in your skin. A thin, flexible tube with a light and camera on the end (called a laparoscope) is put into one incision. Long, thin tools are then put into the other incisions to do the surgery. Laparoscopy often leads to less time in the hospital after surgery. It tends to cause less pain and scarring and has a faster recovery.

- **Robotic-assisted surgery.** This type of surgery is like laparoscopic surgery, but it's done by robot arms that are guided by a surgeon who sits at a computer panel. It's only done at certain surgery centers. And it should be done only by a healthcare provider with training and a lot of experience. This type of surgery uses smaller incisions and may lead to less pain and scarring after surgery.

Risks of kidney cancer surgery

All surgery has risks. The risks of kidney surgery include:

- Excess bleeding
- Infection
- Damage to nearby internal organs and blood vessels
- Bulging of organs under the incision (hernia)
- Air in the chest cavity (pneumothorax)
- Kidney failure of the remaining kidney
- Urine leaking into the abdomen after partial nephrectomy

Your risks depend on your overall health, the type of surgery you need, and other factors. Talk with your healthcare provider about which risks apply most to you.

Getting ready for your surgery

Your healthcare team will talk with you about the surgery choices that are best for you. You may want to bring a family member or close friend with you to appointments. Write down questions you want to ask about your surgery. Make sure to ask:

- What type of surgery will be done
- What will be done during surgery
- The risks and possible side effects of the surgery
- If you'll have kidney function after surgery (or if you will need dialysis)
- When you can go back to doing your normal activities
- If the surgery will leave scars and what they'll look like

Before surgery, tell your healthcare team if you are taking any medicines. This includes prescription and over-the-counter medicines, vitamins, herbs, and other supplements. It also includes marijuana or illegal drugs. This is to make sure you're not taking anything that could affect the surgery. After you've discussed all the details with the surgeon, you'll sign a consent form that says that the healthcare provider can do the surgery.

You'll also meet the anesthesiologist and can ask questions about the anesthesia and how it will affect you. Be sure to tell your healthcare provider if you had problems with anesthesia in the past. Before surgery starts, an anesthesiologist or a nurse anesthetist will give you certain medicines (called anesthesia) that make you fall asleep so you don't feel pain.

After your surgery

You'll wake up in a recovery room. You'll be watched closely as you fully wake up and are able to talk to the nurses. You may have to stay in the hospital for about 1 to 7 days, depending on the type of surgery you had.

For the first few days after surgery, you're likely to have pain from the incision. Your pain can be controlled with medicine. Talk with your healthcare provider or nurse about your choices for pain relief. Some people don't

want to take pain medicine, but doing so can help you recover and heal. For instance, if you don't control pain well, you may not want to cough, turn often, or get out of bed, all of which you need to do as you recover from surgery.

It may be uncomfortable to breathe deeply after surgery. You will be asked to do deep breathing exercises to keep you from getting a lung infection (pneumonia),

You will likely have a urinary catheter for a few days. This is a tube put through your urethra (the tube that carries urine out of your body) and into your bladder so that your urine drains into a bag outside your body. You may go home with the catheter for a while.

You may have bowel problems right after surgery. If you have diarrhea, ask what you can do about it. Sometimes diet changes can help. Constipation is common from using certain pain medicines, not moving much, or not eating and drinking as much as usual. Talk with your healthcare provider or nurse about getting more dietary fiber or using a stool softener.

Recovering at home

When you get home, you may get back to light activity within a week or two. You should not do any strenuous activity or heavy lifting for at least 6 weeks.

You may feel sore, tired or weak for a while. The amount of time it takes to recover from surgery is different for each person. But you may not feel like yourself for a few months. You'll be able to get your incision wet in the shower. But to reduce your risk of infection, don't take baths or swim. Ask your healthcare provider when it's OK for you to drive.

Your healthcare team will tell you what kinds of activities are safe for you while you recover.

Follow-up care

Your healthcare provider will use blood tests to follow how well your remaining kidney works. You may need more treatment after surgery. This will not start until you've had time to heal. Your healthcare provider will talk with you about the next steps of treatment and when it will start. Make sure you know what to do and make a follow-up appointment.

When to call your healthcare provider

You may need to take medicine when you go home, such as pain medicine or antibiotics. It's important to know what you're taking. Get a written list of the names of all your medicines. Ask your healthcare team how to take them, how they work, what they're for, and what side effects they might cause.

Talk with your healthcare providers about what problems to watch for and when to call them. Call right away if you have any of these problems after surgery:

- Bleeding
- New pain or pain that's worse
- Redness, swelling, warmth, or fluid leaking from the incision
- Incision opens up or the edges pull apart
- Fever of 100.4°F (38°C) or higher, or as advised by your healthcare provider
- Chills
- Changes in how much urine you're making or changes in how it looks or smells
- Cough or shortness of breath
- Rapid, irregular heartbeat; new chest pain
- Pain, redness, swelling, or warmth in an arm or leg

Make sure you know who and what number to call with problems or questions. Also be sure you know what number to call to get help after office hours and on weekends and holidays.

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