According to the American Cancer Society, in 2011, approximately 60,920 people in the United States will be diagnosed with kidney cancer. The good news is that more than 200,000 kidney cancer survivors are living in the United States right now. Recent advances in diagnosis, surgical procedures, and treatment options will allow even more patients to live with the disease, continuing to maintain their normal activities and lifestyles.

Surgery is considered the primary treatment for most kidney cancers. A variety of surgical procedures are available, depending on the type, size of tumor, extent of disease and the patient’s overall physical condition. Your doctor will discuss the surgical options, including radical nephrectomy, which are appropriate for you.

**What Will I Learn by Reading This?**

You and your doctor are talking about a surgical procedure called a radical nephrectomy as a way to control your kidney cancer. To help you get ready for your surgery, it is important for you to learn as much about this kind of treatment as possible. It is also important to learn how to manage your care after the surgery. You will learn:

- A description of the surgical procedure,
- What to expect when you have a radical nephrectomy,
- How to take care of yourself after the surgery,
- What kind of support is available to kidney cancer patients.

**What Do My Kidneys Do?**

Most people have two kidneys. The main function of the kidneys is to produce urine. However, the kidney accomplishes many other important functions during urine production. By adjusting the make-up of the urine, the kidney regulates the body's electrolytes (e.g. sodium, potassium, calcium, magnesium, etc.), regulates the body's fluid balance, and eliminates certain waste products made by the body.

**What is a Radical Nephrectomy?**

A radical nephrectomy is when your kidney is removed during surgery. This is most frequently performed for the treatment of kidney cancer. In this surgery, the kidney, and often the adrenal gland and the surrounding lymph nodes are removed. Most people do fine with only one kidney.

**What Can I Expect From This Procedure?**

A radical nephrectomy can be performed in both the open and laparoscopic manner. Open surgery is performed by making an incision (a cut) in the patient's side, abdomen or lower back while the kidney is removed. To perform the operation an incision is made across the side or in the front, just below the rib
cage. This allows the surgeon to thoroughly examine the kidney and the surrounding tissue for any possible tumor spread. To completely remove the cancer, the kidney, adrenal gland and the lymph nodes around the kidney are removed. It usually takes two (2) hours to perform this operation.

Laparoscopic radical nephrectomy is a minimally invasive surgical procedure, generally used for smaller, localized renal tumors, or tumors that have not spread outside the kidney. This procedure is performed by making several small "key-hole" incisions in the abdominal cavity. The surgeon inserts a tiny camera, or laparoscope, through the incision and uses specialized surgical instruments to perform the surgery and remove the kidney or tumor. In some cases, a somewhat larger incision is made to allow for easy removal of an intact kidney. The benefits usually include a shorter hospital stay, faster recovery, and less pain afterwards.

Today, the UCLA Kidney Cancer Program team of urologic and medical oncologists will often combine surgical methods with other treatment options, such as immunotherapy or targeted agents, when treating metastatic or advanced kidney cancer. Often times, using a combination of treatments will improve the long-term prognosis of many patients. Because we are able to offer all treatment options, we can tailor the treatment to each individual patient. Your surgeon will discuss all options with you.

What Happens Before the Operation?

If your doctor recommends a nephrectomy, you will probably have lots of questions and concerns. Be sure to share these with your doctor. Getting answers to these questions can help relieve or reduce your anxiety so you can focus on healing and fighting your cancer.

Patients scheduled for radical nephrectomy are admitted to the hospital the day of surgery. On the day of surgery, your family can wait for you in the surgical waiting area on the first floor of the Ronald Reagan Hospital. On completion of your operation the surgeon will contact your family there. The usual hospital stay for open surgery is 3-5 days, but this is often shorter for laparoscopic surgery.

What Happens After the Operation?

After the operation, you will be taken to the recovery room until you are awake and vital signs (blood pressure, pulse and respiration) are stable. Any pain or discomfort will be relieved with medications. Some patients will need to stay in the Intensive Care Unit (ICU), while most will be transferred to a regular hospital room.

Patients may have some drainage from the operative site, so a large dressing is usually worn for several days.

Most patients will not have a bowel movement for several days after surgery. Stool softeners are given while in the hospital and patients should request a laxative if they have not had a bowel movement within 1 week of the surgery. After leaving the hospital, constipation should be avoided by including a lot of fiber and fluid in the diet. Patients taking any narcotic medication must be particularly careful to
avoid constipation. Milk of Magnesia is a gentle laxative. Metamucil or any of the bulk laxatives taken every day will regulate your bowel movements and are an excellent way of preventing constipation.

**When Will I Have My First Follow-up Appointment with my Doctor?**

Call your doctor’s office to make an appointment for your post-operative check. Your first doctor visit after your surgery is usually scheduled for three (3) weeks after you leave the hospital.

Even after surgery, you will need to be seen routinely in clinic to make sure the cancer has not returned or to arrange further treatments. Make sure you don’t miss any follow-up appointments.

However, if you experience any of the following before your appointment, please call your surgeon’s office at any time. After hours you will be able to contact an on-call physician. Occasionally, you may need to be directed to the nearest emergency room if you experience any of the following:

- pain or swelling in the legs
- sudden chest pain
- blood in the urine
- fever (over 100)
- nausea, vomiting or abdominal cramps

**Will I be on a Special Diet After Surgery?**

Liquids and solid food will usually be held for three to four days after surgery. It may take this long for the intestines to recover from the anesthesia. Drinking or eating too soon may cause nausea and vomiting.

**Will My Physical Activity Be Restricted After Surgery?**

It takes approximately four (4) weeks for the surgical area to heal completely. Patients should not do any heavy lifting, exertion exercises, or excessive stair climbing during this time but may drive a car two (2) weeks after surgery. The length of time patients must stay home from work depends on the amount of physical effort the work requires. Your physician will discuss this with you.

**What Kind of Support and Help Can I Expect?**

You will not go through this surgery alone. A radical nephrectomy can present a difficult emotional adjustment. Support is available to help patients deal with this impact on their lives. A social worker is part of the team to care for patients while in the hospital. Patients or their families can request a social worker to help provide emotional support during this difficult time. After discharge, the social worker can provide names and numbers of support groups. You can call (310) 825-7171 to talk to the social workers.

After discharge from the hospital the names and phone numbers of support groups can be obtained by contacting:
• The Wellness Community. Get support online at http://www.cancersupportcommunity.org/ or via phone at (888) 793-9355.

• The Kidney Cancer Association. Get support online at http://www.kidneycancer.org, via phone at (800) 850-9132 or email office@kidneycancer.org.

Questions to Ask Your Doctor

These questions may be useful to you when you talk to your doctor about your kidney cancer and the radical nephrectomy surgical procedure:

• What is the stage of my cancer, and what does that mean in my case?

• Will I need more treatment after surgery?

• What are the risks or side effects of having this surgery?

• Are there any clinical trials I should think about?

Hints for Talking with Your Doctor

These tips may help you keep track of the information you and your doctor talk about during your visits:

• Make a list of questions you want to ask your doctor before your appointment.

• Bring a friend or family member to sit with you while you talk with your doctor. Some people get very nervous when they visit their doctor. Sometimes you can’t remember everything that you talk about with your doctor. A friend or family member can help you remember what you and your doctor talked about.

• You, or the person who goes with you, may want to take notes during your appointment.

• Ask your doctor to slow down if you need more time to write down your notes.

• You may want to ask your doctor if you can use a tape recorder during your visit. Take notes from the tape after your visit is over. This way, you can review your talk with your doctor as many times as you want.

What Have I Learned by Reading This?

• What the function of the kidneys are,

• What a radical nephrectomy is and why this procedure is needed,

• What to expect after the surgery.
If you have any questions, please talk to your doctor or health care team. It is important that you understand what is going on with your surgery and general healthcare. This knowledge will help you take better care of yourself and feel more in control so that you can get the most from your treatment.

Key Words

**Adrenal Gland**: located at the top of each kidney, its main function is to make hormones which control metabolism (processing food for energy), fluid balance, and blood pressure.

**Anesthesia**: the medicine the doctor gives you that keeps you from feeling pain when you have surgery.

**Electrolytes**: the smallest of chemicals that are important for the cells in the body to function and allow the body to properly work.

**Fluid Balance**: the amount of fluid lost from the body is equal to the amount of fluid taken in.

**Kidneys**: a pair of bean-shaped organs, each about the size of a fist and weighing about 4 to 5 ounces, with a main function of producing urine.

**Lymph nodes**: small rounded masses of lymphatic tissue surrounded by a capsule of connective tissue. Lymph nodes filter the lymphatic fluid and store special cells that can trap cancer cells or bacteria that are traveling through the body in the lymph fluid.

**Metastatic Cancer**: cancer that has spread from the part of the body where it started (the primary site) to other parts of the body.

**Minimally Invasive Surgical Procedure**: surgical technique using miniature instruments inserted via a small tube (called a laparoscope) through tiny incisions in the body.

**Prognosis**: the outlook for the chances of survival.

**Radical Nephrectomy**: surgical procedure for removal of the kidney.

**Renal Cell Carcinoma**: the most common form of kidney cancer.

**Transitional cell carcinoma of the Kidney**: cancer of the lining of the kidney.