Kidney Cancer Surgery: Your Pathway to Recovery

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The Urology Clinic at Roswell Park Cancer Institute diagnoses, treats, and manages benign and malignant tumors of the urinary system. Common tumors treated include those of the adrenal gland, kidney, ureter, bladder and urethra in men and women, and those of the prostate, testicles and penis in men.

Overview

Roswell Park's urology team offers comprehensive programs for the diagnosis and treatment of urinary cancers. At Roswell Park, board-certified physicians including specialists in surgery, radiation oncology, medical oncology, urology, pathology, radiology, anesthesiology, as well as mid-level practitioners (nurse practitioners, physician assistants), nurses, social workers, psychiatrists, psychology and dietitians, work as a team to provide optimal care for our patients.

Your team of doctors, nurses, operating room staff, case managers, and technologists are specially trained to care for patients with malignancies of the genitourinary system.

Multidisciplinary Team

The Urology Clinic/Prostate Cancer Center multidisciplinary team includes health professionals with different specialties to meet your needs and those of your family. The team includes:

**Urologic Surgery**
- James L. Mohler, MD
- Robert P. Huben, MD
- Khurshid A. Guru, MD
- Willie Underwood III, MD, MS, MPH
- Thomas Schwab, MD
- Marcus Sikorski, MS, ANP-C
- Joel A. Gajewski, PA

**Medical Oncology**
- Donald L. Trump, MD, FACP
- Roberto Pili, MD
- Ellis G. Levine, MD
- Michael K. Wong, MD, PhD, FRCPC
- Manpreet K. Chadha, MD
Teresa M. Palmieri, MS, ANP-C
Sandra R. Fundalinski, MS, ANP-C
Carrie G. Silliman, MS, FNP-C
Karen L. Vona, MS, ANP-C
Jill S. Nestico, MS, ANP-C

**Radiation Medicine**
Michael R. Kuettel, MD, PhD, MBA
Mohammed K. Khan, MD, PhD
Anurag K. Singh, MD
Brian P. Sullivan, PA

**Nursing Administrators**
Kathleen A. Field, BSN, RN, CCRP, OCN, Nurse Manager, Urology Clinic/Prostate Cancer Center
Christina C. McMahon, MS, RN, Nurse Administrator, 6 East

**Urology Clinic/Prostate Cancer Center Nursing**
Michael T. Mallabar, RN
Richard T. Powers, RN
Christine A. Pieri, RN, OCN
Anita Staley, RN
Jane M. Novelli, RN
Cathrin-Marye D. McMullin, BSN, RN, OCN
Mary Lou T. Cappellini, BSN, RN
Kathleen A. Flattery, LPN
Dawn M. Havens, LPN

**Enterostomal Therapy**
Lucia L. Scarpino, RN, MS, CWOCN
Melissa S. Hiscock, BSN CWOCN

**Pharmacist**
Anthony Jarkowski III, PharmD, BCOP

**Case Management**
Kevin B. Lennon, BSN, RN, Case Manager

**Psychology**
Megan E. Pailler, PhD

**Pathology**
Borislav A. Alexiev, MD
How to Contact Us

Contacting Us

The Urology Clinic is open between the hours of:

- 8:00 am and 4:30 pm, Monday through Friday

For medical questions, problems, prescriptions, appointments:

- call the Urology Clinic at (716) 845-3159

After 4:00 pm, weekends and holidays:

- call (716) 845-2300 and ask for the urology surgeon on call

For Case Management (if you need assistance with your home care):

- call (716) 845-5735

When to Call Your Doctor

Here are some general guidelines to follow for knowing when to call your doctor or when to go to the emergency room:

**Call your doctor if:**

- your temperature is above 101°F or you have shaking chills
- you have vomiting for more than 24 hours
- you have a new onset of swelling in your legs

**Go to the emergency room or call 911 if:**

- you suddenly have trouble breathing or start having chest pain
- you develop severe pain in your abdomen or chest
- you have a change in your level of consciousness or loss of vision or strength

Roswell Park does not have an emergency department. If you live in the Buffalo area and find yourself in an emergency situation, we would like to ask you to go directly to Buffalo General Hospital which is adjacent to Roswell Park. We have a cooperative relationship with them and they will take care of you and contact your Roswell Park doctor to coordinate your care. Please bring your green Roswell Park identification card to Buffalo General so they know you are a Roswell Park patient.

If you live outside of the Buffalo area, please go directly to your **nearest hospital emergency department.**
Understanding Kidney Cancer

How the Kidneys Work

The kidneys are a pair of organs on either side of the spine near the middle of the back. Each kidney is about the size of a fist. Attached to the top of each kidney is an adrenal gland. A mass of fatty tissue and an outer layer of fibrous tissue enclose the kidneys and adrenal glands.

The kidneys are part of the urinary tract. They make urine by removing wastes and extra water from the blood. Urine collects in a hollow space (renal pelvis) in the middle of each kidney. It passes from the renal pelvis into the bladder through tubes called ureters. Urine leaves the body through another tube, called the urethra.

The kidneys also make substances that help control blood pressure and the production of red blood cells.
What is Kidney Cancer?

Cancer is abnormal cell growth that can occur in any part of the body. Several types of cancer can start in the kidney. **Renal cell cancer** is the most common type of kidney cancer in adults. This type of cancer may be called **renal carcinoma** or **hypernephroma**.

Another type of cancer, **transitional cell carcinoma**, affects the renal pelvis in the kidney and the ureter. It is similar to bladder cancer and is often treated like bladder cancer.

**Wilms' tumor** is the most common type of childhood kidney cancer. It is different from adult kidney cancer and requires different treatment.

When kidney cancer spreads outside the kidney, cancer cells are often found in nearby lymph nodes. Kidney cancer also may spread to the lungs, bones, brain or liver and from one kidney to the other.

When cancer spreads (metastasizes) from its original place to another part of the body, the new tumor has the same kind of abnormal cells and the same name as the primary tumor.

For example, if kidney cancer spreads to the lungs, the cancer cells in the lungs are actually kidney cancer cells. The disease is metastatic kidney cancer, not lung cancer and it is treated as kidney cancer. Doctors sometimes call the metastatic cancer **"distant" disease.**
Stages of Kidney Cancer

The American Joint Committee on Cancer (AJCC) uses the TNM classification to define the stages of kidney cancer:

- **T is for Tumor.** The number after the T indicates the size of the tumor and how far it has invaded. The larger the number, the bigger and/or more invasive the cancer.
  - **T0** means there is no evidence of primary tumor.
  - **T1** means the tumor is 7 cm or less and is limited to the kidney.
    - **T1a** means the tumor more than 4 cm or less in greatest dimension, limited to the kidney.
    - **T1b** means the tumor is more than 4 cm but not more than 7 cm and is limited to the kidney.
  - **T2** means the tumor is more than 7 cm and is limited to the kidney.
  - **T3** means the tumor extends into major veins, the adrenal gland, or the tissue around the nephrons, but does not go beyond Gerota's fascia.
    - **T3a** means the tumor has invaded the adrenal gland or the nearby fatty tissue but does not go beyond Gerota's fascia.
    - **T3b** means the tumor has deeply invaded the renal vein or one of its branches, or has invaded the vena cava (a major vein that brings blood to the heart so it can be pumped to the lungs to get oxygen) below your diaphragm.
    - **T3c** means the tumor extends into the vena cava above your diaphragm or it has invaded the wall of the vena cava.
  - **T4** means the tumor invasion has gone beyond Gerota's fascia.

- **N is for Nodes.** The number after the N indicates whether the cancer has spread to the lymph nodes and to what extent.
  - **Nx** means the regional lymph nodes cannot be assessed.
  - **N0** means there is no cancer in the lymph nodes in the region of the cancer.
  - **N1** means there has been metastasis to one regional lymph node.
  - **N2** means there are metastases to more than one regional lymph node.

- **M is for Metastasis.** The number after the M indicates whether the cancer has spread to distant areas of the body.
  - **Mx** means that metastasis cannot be assessed.
  - **M0** means there is no distant metastasis.
  - **M1** means the cancer has metastasized to at least one site distant from the kidney.
An older method of classifying kidney cancer used Stages I through IV. The chart below shows how the TNM system currently used fits the older staging method.

**STAGE GROUPING**

<table>
<thead>
<tr>
<th>Old Staging Method</th>
<th>Tumor</th>
<th>Nodes</th>
<th>Metastases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>T1</td>
<td>N0</td>
<td>MO</td>
</tr>
<tr>
<td>Stage II</td>
<td>T2</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>Stage III</td>
<td>T1</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T3</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T3</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T3a</td>
<td>N0 or N1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T3b</td>
<td>N0 or N1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>T3c</td>
<td>N0 or N1</td>
<td>M0</td>
</tr>
<tr>
<td>Stage IV</td>
<td>T4</td>
<td>N0 or 1</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>Any T</td>
<td>N2</td>
<td>M0</td>
</tr>
<tr>
<td></td>
<td>Any T</td>
<td>Any N</td>
<td>M1</td>
</tr>
</tbody>
</table>

**Treatment Options**

Treatment depends mainly on the stage of your disease, your age, and your general health. Your doctor can describe treatment choices and discuss the expected results and then you can work together to develop a treatment plan that fits your needs.
The main treatment options for kidney cancer are:

- surgery (tumor removal)
- tumor ablation
- drug therapies

**Surgery**

Surgery is the most common treatment for kidney cancer. It is a type of local therapy because it treats cancer in the kidney and the areas close to the tumor. An operation to remove the kidney is called a **nephrectomy**.

In most cases a partial nephrectomy can be performed to completely remove the tumor and preserve the healthy portion of the kidney. A partial nephrectomy is less likely than a total nephrectomy to lead to medically significant decreases in kidney function. In most cases, both total nephrectomies and partial nephrectomies can be performed laparoscopically, thus shortening the hospital stay and recovery time.

There are several types of nephrectomies. The type you have depends mainly on the stage of the tumor. Your doctor can explain each operation and discuss which one may be the most suitable.

**Tumor Ablation**

**Arterial embolization** is a type of local therapy that shrinks the tumor. Sometimes it is done before an operation to make surgery easier. When surgery is not possible, embolization may be used to help relieve symptoms.

**Cryoablation**, also called cryotherapy, is the use of extreme cold produced by liquid nitrogen (or argon gas) to destroy abnormal tissue. For internal tumors, liquid nitrogen or argon gas is circulated through a hollow instrument called a cryoprobe, which is placed in contact with the tumor. The doctor uses ultrasound or CT to guide the cryoprobe and limit the damage to nearby healthy tissue. After cryoablation, the frozen tissue thaws and is naturally absorbed by the body.

**Radiofrequency ablation (RFA)** involves inserting a thin needle, guided by ultrasound or CT scan, through the skin (or, in some cases, through a laparoscopic incision) and into the core of a tumor. At this point, the tumors are ablated, or “cooked” thus destroying the tumor and any cancer cells in the tissue surrounding the tumor, called the margin.

**Drug Therapies**

**Immunotherapy with IL-2** or interferon may be an option. Immunotherapy (or biologic therapy) prompts your own immune system to attack the cancer.

Targeted therapies such as **Sorafenib** or **Sunitinib** may be another option. Targeted therapies are medications that block the growth of cancer cells by interfering with specific processes that the cancer cells need to grow.
A clinical trial is a study designed to evaluate a promising new medical treatment. It includes research done to evaluate new ways to prevent and diagnose and/or treat cancer. At Roswell Park, up to 50% of our patients are eligible to enter clinical trials. Many types of treatment can be tested including:

- New ways of preventing cancer such as drugs, diet, and/or exercise
- New drugs to treat cancer
- New ways to use existing treatment such as surgery or radiation therapy

Patients who join clinical trials have the first chance to benefit from new treatments that have shown promise in earlier research. They also make an important contribution to medical science by helping doctors learn more about the disease. Although clinical trials may pose some risks, researchers take many steps to protect their patients.

When clinical trials identify new and effective treatments, these treatments will eventually become the new standard of care that will be offered to future patients. Today’s standard treatments were researched and proven by clinical trials done in the past.

If you are interested in clinical trials, please talk to your doctor. You can also search for current clinical trials available at Roswell Park on our website at www.roswellpark.org. Look for the link to the Clinical Trials Search tool.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>adrenal glands</td>
<td>A pair of endocrine organs near the kidney that produces glucocorticoid, mineralocorticoid, and epinephrine and norepinephrine</td>
</tr>
<tr>
<td>benign</td>
<td>Tumors that do not spread beyond their local area; non-cancerous</td>
</tr>
<tr>
<td>biopsy</td>
<td>Removal of a small amount of tissue to diagnose the disease process</td>
</tr>
<tr>
<td>bladder</td>
<td>A hollow organ in the lower abdomen that stores urine, the liquid waste produced by the kidneys</td>
</tr>
<tr>
<td>bone scan</td>
<td>A technique to create images of bones on a computer screen or on film. A small amount of radioactive material is injected into a blood vessel and travels through the bloodstream; it collects in the bones and is detected by a scanner</td>
</tr>
<tr>
<td>cancer</td>
<td>A group of diseases where abnormal cells spread throughout the body</td>
</tr>
<tr>
<td>carcinoma in situ</td>
<td>Cancer (carcinoma) that involves only cells in the tissue in which it began (in situ) and that has not spread to nearby tissues</td>
</tr>
<tr>
<td>catheter</td>
<td>A flexible tube used to deliver fluids into or withdraw fluids from the body. A Foley catheter is a soft plastic or rubber tube that is inserted into the bladder to drain urine</td>
</tr>
<tr>
<td>chemotherapy</td>
<td>Any cancer treatment that uses drugs to kill cancer cells. Intravenous chemotherapy refers to treatment in which the drugs are given through a vein</td>
</tr>
<tr>
<td>creatinine</td>
<td>A compound that is excreted from the body in urine. Creatinine levels are measured to monitor kidney function</td>
</tr>
<tr>
<td>CT or CAT scan</td>
<td>Special x-ray that uses computers to produce detailed pictures of a cross section of the body</td>
</tr>
<tr>
<td>fulguration</td>
<td>Destroying tissue using an electric current</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Gerota's fascia</td>
<td>A fibrous envelope of tissue that surrounds the kidney. (also called renal fascia and Gerota's capsule)</td>
</tr>
<tr>
<td>Jackson-Pratt drain</td>
<td>A thin rubber tube inserted into the body to drain fluid from and around the area where surgery was performed</td>
</tr>
<tr>
<td>kidneys</td>
<td>The kidneys make urine by removing wastes and extra water from the blood. Urine collects in the renal pelvis in the middle of each kidney and passes into the bladder through a tube called a ureter</td>
</tr>
<tr>
<td>lymph nodes</td>
<td>Small bean shaped organs scattered throughout the body that filter bacteria or cancer cells that travel through the lymphatic system</td>
</tr>
<tr>
<td>lymphatic system</td>
<td>Organs that produce and store infection-fighting cells. Includes lymph nodes, bone marrow, spleen and thymus</td>
</tr>
<tr>
<td>malignant</td>
<td>Cancerous tumors that are capable of spreading to other parts of the body</td>
</tr>
<tr>
<td>metastasis</td>
<td>The spread of cancer from one body part to another</td>
</tr>
<tr>
<td>MRI (Magnetic Resonance Imaging)</td>
<td>A noninvasive diagnostic technique that produces computerized images of internal body tissues and is based on nuclear magnetic resonance of atoms within the body induced by the application of radio waves</td>
</tr>
<tr>
<td>nephrectomy</td>
<td>Surgical removal of a kidney</td>
</tr>
<tr>
<td>pathologist</td>
<td>A physician who specializes in diagnosing diseases by examining tissue, blood, and body fluids using various laboratory techniques</td>
</tr>
<tr>
<td>PET (Positive emission tomography) scan</td>
<td>Uses small amounts of radioactivity to take detailed pictures of different areas inside your body</td>
</tr>
<tr>
<td>radiation therapy</td>
<td>Treatment with a series of x-rays that kill cancer cells inside the body</td>
</tr>
<tr>
<td>radionuclide</td>
<td>A small amount of radioactive glucose that is injected into a vein in order to produce detailed, computerized pictures of areas inside the body</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>renal cell carcinoma</td>
<td>A type of kidney cancer: cancerous cells are found in the lining of very small tubes (tubules) in the kidney (Most common type of kidney cancer in adults)</td>
</tr>
<tr>
<td>renal pelvis</td>
<td>The area at the center of the kidney. Urine collects here and is funneled into the ureter, the tube that connects the kidney to the bladder</td>
</tr>
<tr>
<td>staging</td>
<td>Process of determining how far the cancer has progressed using blood tests and other diagnostic tests</td>
</tr>
<tr>
<td>transurethral</td>
<td>Describes any operation that is performed through (trans) the urethra.</td>
</tr>
<tr>
<td>tumor grade</td>
<td>A classification that describes how aggressive a cancer appears to be</td>
</tr>
<tr>
<td>ureters</td>
<td>The tube that carries urine from the kidney to the bladder</td>
</tr>
<tr>
<td>urethra</td>
<td>The tube that carries urine from the bladder to the outside of the body</td>
</tr>
<tr>
<td>urine</td>
<td>Fluid containing water and waste products. Urine is made by the kidneys, stored in the bladder, leaves the body through the urethra</td>
</tr>
</tbody>
</table>
Renal Scan

Overview

A renal scan is a nuclear medicine examination that uses small amounts of radioactive materials (radioisotopes) to measure the function of the kidneys.

Preparing for Your Scan

- There is usually no need for fasting, special diets, or preliminary medications for a renal scan.
- Tell your doctor or nurse if you are taking:
  - any non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin, ibuprofen (Motrin or Advil), naproxen (Aleve)
  - blood pressure medications

The Day of Your Scan

- You may be asked to drink additional fluids before the scan.
- You will need to remove any jewelry, dentures, and metallic objects before your scan.
- You will be helped onto the scanning machine.
- A small amount of radioisotope will be injected into one of your veins. You may feel a brief sting or pinch when the IV is inserted.
- The isotope will travel through your bloodstream and a short time later, your kidneys will be ready to be scanned.
- Several images are taken. The total scan may take 30 to 60 minutes.

After the Scan

- You may be asked to drink plenty of fluids and urinate frequently to help excrete the radioactive material from the body.
- For the next 24 hours you should wash your hands thoroughly after you urinate. You will be excreting the isotopes through your urine.
- It is also a good idea for the next 24 hours to flush the toilet twice after you urinate.
Ureteroscopy

Overview
Ureteroscopy is a minimally invasive technique during which a thin, lit, flexible scope, called an *ureteroscope* is passed through the urethra, into the bladder, and then up into the ureter(s).

Preparing for an Ureteroscopy
Before your procedure, your doctor may order certain blood or urine tests. If you suspect that you may have a urinary tract infection, please call the physician office immediately so that proper antibiotics can be prescribed before your surgery.

- **One week before surgery do not take:**
  - aspirin, aspirin-like products, NSAIDs (such as ibuprofen/ (Advil®), naproxen/Aleve®)
  - any medicine to "thin the blood" such as Coumadin® or heparin,

- **Tell your doctor if you are taking:**
  - aspirin, ibuprofen or Plavix®
  - insulin or any diabetic medications you take by mouth
  - arthritis medications
  - heart and hypertension medicine
  - over-the-counter medications, herbal, or vitamin supplements

- Check with your doctor to find out if you need to stop any of these medications prior to your procedure.

The Day of Your Ureteroscopy
The procedure lasts from 1 to 3 hours and is usually done under general anesthesia. If you are going home the same day, please arrange to have someone available to drive you home.

Ureteroscopy usually can be performed as an outpatient procedure. You may require an overnight hospital stay, however, if the procedure proves lengthy or difficult.

After Your Ureteroscopy
If you received general anesthesia, you will need to rest for 24 hours following the procedure. During that time, do not drive or use any machinery.

- Your doctor will tell you about any physical limitations you may have.
- You are likely to feel a burning sensation when you urinate, but this should go away quickly.
• You may notice a small amount of blood in your urine. This may continue, on and off, for a few weeks. These are normal side effects. Please talk to your doctor if you have any questions or concerns about this.

• To relieve discomfort, drink two 8-ounce glasses of water every hour for 2 hours. Ask your doctor if you can take a warm bath to relieve the burning feeling. If not, you may be able to hold a warm, damp washcloth over the urethral opening.

• Your doctor may give you an antibiotic to take for 1 or 2 days to prevent an infection.

When to Call the Doctor

Call your doctor immediately if:

• your bleeding becomes excessive

• you are unable to urinate

• you experience any signs of infection such as chills, fever, pain or swelling
Radionuclide Bone Scan

Overview

A bone scan identifies changes or problem areas in the bones of your body. The bone scan is a reliable and painless test in which images of all the bones in your body are taken by using a small amount of radioactive material and special scanning equipment.

The bone scan is often done as part of a check-up to be sure that the bones are free of cancer and to determine the effects of cancer treatment.

The total amount of radiation that you are exposed to during the bone scan is very low.

A medication that contains a small amount of radioactive material is injected into a vein in the arm. After about 2 to 3 hours, the bone cells have collected the medication from the circulating blood.

Radiation rays from the medication make an image on photographic film. A nuclear medicine doctor studies this picture and notes any changes or problem areas in the bones. A report is then sent to your physician.

Day of Your Scan

- A nuclear medicine technologist will inject the medication into a vein, usually in your arm. You may feel a brief sting in your arm when the IV is inserted.
- You will be asked to return to the Nuclear Medicine Clinic 2 to 3 hours later.
- To ensure accurate results, please return on time.
- If for some unavoidable reason you cannot keep your appointment, please notify the Nuclear Medicine Clinic at (716) 845-3231.
- When you return for the bone scan, dress in clothing that has no metal accessories that could interfere with the picture.
- Empty your bladder before your scan begins.
- You will be helped onto the scanning machine, which consists of a firm bed with a camera above it. A nuclear medicine technologist will help position you and adjust the camera.
- As you lie on your back, the scanner will be positioned over you and will then move over the entire length of your body. This will be done over the top to make an anterior picture and once from below to make a posterior picture.
- Additional views may be required for accurate interpretation by the physician studying the pictures.
- The bone scan will take about 1 hour. During the bone scan, try to relax, breathe normally and lie very still. Too much movement will cause a poor quality picture that is difficult to interpret.
After the Scan

There are no side effects from the bone scan. You can resume normal activities. The radioactive material presents no immediate danger to you or to the people around you, and no special precautions are needed.

Within 6 hours after the injection, more than half of the radioactivity is either expended or eliminated from your body. After 48 hours, the radioactivity is completely gone.
CT Scan

Overview

A CT (computed tomography) scan, also called a CAT (computed axial tomography) scan, is a diagnostic exam used to detect tumors, determine the stage and location of a cancer, and find out about the effectiveness of cancer treatment.

The CT scan may also be used to guide a doctor who is performing a biopsy (the removal of a small amount of tissue for examination).

The CT scan obtains multiple cross-sectional images of your body by using special x-rays and computer enhancement, creating an image many times more sensitive than the image from a simple x-ray.

The visit will generally last up 1 to 1 ½ hours, although the scanning itself takes only 10 to 15 minutes. When the scan is finished, you may be asked to remain on the exam table while a radiologist reviews the images to determine if additional images are needed.

Preparing for Your CT Scan

- Tell the doctor if you previously had an allergic reaction to intravenous (IV) dye or any other allergies, especially iodine.

- When your doctor schedules a CT scan, let him or her know if you have diabetes (sugar in the blood) and take a drug called Glucophage® (metformin). You may be asked not to take it the day before your CT scan, the day of your CT scan, and for 2 days after your CT scan. Check with your doctor for your specific instructions.

- Tell your doctor/nurse about all your medications, including over-the-counter products, vitamins, and herbal supplements.

- Check with your doctor/nurse if you should take your regular medications that day.

- Women: tell your doctor if you are breast-feeding or may be pregnant.

- Do not eat anything for 6 hours before your scan.

- Do not drink anything for 2 hours before your scan.

The Day of Your CT Scan

- If you have been instructed to take medications on the day of your scan, you may take them with a small sip of water.

- Wear loose, comfortable clothing to your appointment. When you arrive for your CT scan, you may need to change into a gown.

- You will be asked to remove any item that contains metal (including jewelry, eyeglasses, dentures and hairpins) because metal objects may affect the CT images. You may also be asked to remove hearing aids and removable dental work.
Tell the technologist if you have:
  o any allergies to IV dye or iodine
  o asthma
  o multiple myeloma
  o diabetes
  o any disorder of the heart, kidneys or thyroid gland

You may receive a contrast agent before the scan, which may be a drink, an intravenous (IV) injection or both. The contrast helps create a clearer picture of the parts of the body being scanned.

Intravenous contrast may cause you to feel hot or get a metallic taste in your mouth; both sensations should disappear after a few minutes. If you experience a more serious reaction, tell the technologist immediately.

If you have a liquid contrast drink, you will need to wait up to 1 hour before your scan can begin.

A technologist will help position you on the table and then monitor the procedure from an adjoining control room. You can communicate through an intercom system.

The CT scan resembles a large donut. The exam table will slide back and forth through the large hole in the center of the machine as the scanner rotates around you. You will hear whirring or clicking sounds from the machine; some machines are noisier than others.

CT scans are not painful. You will need to lie still for the entire scan, which may become uncomfortable. You may be asked to hold your breath during part of the scan because the motion created by breathing can blur the images. The exam table may be raised, lowered, or tilted to create the correct angle for the x-rays. Ask the technologist performing the scan to tell you when the table will move.

After the Exam

You can expect to resume your normal activities immediately after your CT scan, including driving. If you received a contrast agent for the scan, you may be asked to drink a lot of water to help flush it out of your body.
MRI Scan

Overview

An MRI (magnetic resonance imaging) is an imaging machine that uses a large magnet, a computer, and radio waves to look inside the body and to evaluate various parts of your body. Having an MRI scan is painless and requires minimal preparation.

The test can take anywhere from 30 minutes to 2 hours.

If you become uncomfortable lying still for a long time or if you are uncomfortable with close spaces, talk to your doctor beforehand. He or she may make arrangements for you to receive a sedative before your scan. If you have a sedative, you will need to inform the receptionist and arrive one half hour before the scan to take the medication. If you have a sedative, you must have someone to drive you home.

Preparing for Your MRI

- **IMPORTANT:** If you have a cardiac (heart) pacemaker or brain aneurysm clips you cannot have an MRI. Please discuss your options with your doctor.

- Please be sure to let your doctor and nurse know if you have any allergies.

- Please leave all personal belongings, especially jewelry, money, credit cards etc, at home on the day of the test.

- Because the MRI uses a large magnet, no metallic objects or mechanical devices can be in the MRI room.

- Please let your doctor know if you have any of the following:
  - artificial heart valve or vascular stent
  - metal plate, pin or other metallic implant
  - recently placed artificial joint (hip, knee, etc.)
  - insulin pump or other infusion pump
  - previous gun shot wound
  - inner ear implant

- Please let your doctor know if you are pregnant or on dialysis.

- **Diet:** Generally, there are no restrictions to your diet. Please check with your doctor if you have to follow any special instructions.

- **Medications:** Generally, you may take your usual medications. Please check with your doctor if you have to follow any special instructions for the day of the test.

- **Jewelry:** All metal jewelry and watches must be removed.
- **Dental devices**: If you wear dentures, or partial dental plates, they must be removed.

- **Hair products**: Many hair products or attachable hair weaves contain magnetic particles and they must be removed. You should also remove any hair clips, ties, or pins that are made of metal or have metal parts on them.

- **Make-up**: Because some make-up, particularly mascara, is made with a metallic base, it is best not to wear any on the day of your appointment.

- **Tattoos**: If you have any tattoos, be sure to tell the MRI technologists before your scan.

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**The Day of Your MRI**

- You will change into a hospital gown and be asked to remove all personal belongings, including anything with metal (i.e. jewelry, bank cards, make up, hearing aids etc.).

- Let the MRI technologist know if you are hard of hearing without your hearing aide.

- You may need to be given a contrast dye before the exam to improve the quality of the images made by the machine. If so, a nurse will start an IV before or during the exam. You may feel a brief sting in your arm when the IV is inserted.

- The technologist will position you on the scanning table and then move the table to the center of the MRI machine. The inside of the machine is like a giant tunnel that is well lit and open on each end.

- A device called a "coil" will be placed either over or under you. The coil helps to get a clear picture.

- After you are precisely positioned, the technologist will leave the room. The technologist will be able to see and hear you during the test. Let them know if you need help.

- During the MRI scan, you will hear tapping, thumping and other noises. Earplugs or music may be provided to help block the noise.

- Try to relax and lie as still as possible. Any movement will blur the picture.

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**After the Exam**

- When scanning is complete you can return home and resume your normal activities, medications and diet. The radiologist will interpret the scan and send a report to your physician.
PET Scan

Overview

A PET (positron emission tomography) scan is used to detect changes in the tissues and organs of your body.

X-rays, CT scans, and MRIs show the shape and structure of your body’s organs and tissues. A PET scan shows how they work.

A PET scan uses small amounts of radioactivity, called a radionuclide, to take detailed pictures of different areas inside your body.

A small dose of this radionuclide is injected into a vein in your hand or arm. The radionuclide gives off positively charged energy particles, or positrons. The PET scanner rotates around the body to detect these positrons at many different angles.

If you become uncomfortable lying still for a long time or if you are uncomfortable with close spaces, talk to your doctor beforehand. He or she may make arrangements for you to receive a sedative before your scan. If you have a sedative, you will need to inform the receptionist and arrive one half hour before the scan to take the medication. If you have a sedative, you must have someone to drive you home.

Preparing for Your Scan

- Do not eat or drink for 4 hours before your appointment.
- If you need to take medications, take them with a small sip of water.
- If you have diabetes, contact your physician for specific instructions. You may need to follow special guidelines. Do not take insulin for 4 hours before your scan.

The Day of Your Scan

- Plan to report to the imaging center on time. The dose of your radionuclide is made precisely for the time of your appointment.
- If your brain is being scanned, you will need to wait quietly, usually in a dimly lit room. You will need to avoid any mental stimulation such as reading or talking.
- If other areas of the body are being scanned, you will be able to read, listen to music, etc.
- You may spend 2 to 3 hours at the imaging center. The actual scanning time is anywhere from 20 to 60 minutes. The time can vary depending on the number of areas being scanned that day.
- A soft, flexible tube or needle will be inserted into one of your veins. You may feel a brief sting in your arm when the IV is inserted. The radionuclide will be given to you through this tube.
• You may need to wait about 60 minutes for the radionuclide to move through your body.

• You may be asked not to speak during the procedure in order to prevent the radionuclide from going to your tongue or vocal cords.

• You will be placed on a flat table that moves through a donut shaped opening on the PET scan machine. The scan makes no noise.

• During the scan, you will need to lie very still because any movement could interfere with the test results. The table moves and glides you through the machine, so you do not need to move.

After the Scan
• If you were not sedated, you may leave as soon as the scan is complete.

• Unless you receive special instructions, you may eat and drink immediately and go back to your usual activities and diet.

Risks
No side effects are associated with the radionuclide tracer. The tracer is eliminated rapidly from your body, making it safe for you to be near others during and immediately after your PET scan.
24-Hour Urine Collection

Overview

A 24-hour urine collection is an accumulation of the total amount of urine voided in a 24-hour period. This is an important test to determine how well the kidneys are functioning. It is important that all urine during the 24-hour period is collected or the results may be inaccurate.

Collection Instructions

1. You will be given 2 large brown containers with an instruction sheet. If you are a female, you will also be given a white collection container which fits under the toilet seat to collect your urine. Urine is then poured into the large brown containers. Fill 1 brown container and then the 2nd one, if needed.

2. To start the test, empty your bladder and discard the urine. You must begin this process with an empty bladder. Write down the time you emptied your bladder in the space provided and start counting 24 hours from that time. For example, if you started your collection at 8:00 am, you will finish your collection at 8:00 am the next day.

3. Each time you void, the urine should be collected and stored in the large brown containers and kept at refrigerator temperature throughout the 24 hours. Remember to drink plenty of liquids (at least 8 glasses of water) during the 24 hour period, but do not drink tea and coffee, which act like natural water pills and will cause your body to pass more urine. If you leave your home during this time, you must take the container with you.

4. When your 24 hours are up, you should empty your bladder one last time and add this to the collection container. This will complete your 24 hour urine collection process. Write down the time you finish your collection.

5. Return the brown urine collection containers to the Roswell Park’s Phlebotomy Lab with:
   - The form indicating the start and end times of your collection
   - The laboratory order provided (called Computer Downtime Order Form)

You may need to get your blood drawn so ask the phlebotomist before you leave. The Phlebotomy Lab is located on the ground floor of the main hospital next to Registration (Patient Access). The hours of operation are Monday through Friday from 6:00 am to 6:00 pm.
Nephrectomy: Surgical Removal of the Kidney

The Kidneys and Their Function

The kidneys are responsible for removing wastes from the body, regulating electrolyte balance and blood pressure, and the stimulation of red blood cell production.

Types of Surgery

Surgery is the most common treatment for kidney cancer. An operation to remove the kidney is called a nephrectomy. There are several types of nephrectomies. The type of surgery you have will depend mainly on the stage of the tumor.

Radical nephrectomy: Kidney cancer is usually treated with radical nephrectomy. The surgeon removes the entire kidney along with the adrenal gland and some tissue around the kidney. Some lymph nodes in the area also may be removed.
Simple nephrectomy: The surgeon removes only the kidney. Some people with early kidney cancer may have a simple nephrectomy.

Partial nephrectomy: The surgeon removes only the part of the kidney that contains the tumor and some of the tissue around it. A partial nephrectomy may be done to prevent loss of kidney function when the other kidney is damaged or has already been removed.

Nephroureterectomy: This surgery is similar to a radical nephrectomy but also includes the removal of the entire ureter and a small portion of the bladder.

What Happens During Surgery

During the nephrectomy, your doctor carefully examines all of the organs and tissue in the area of the kidney to make certain that there is no cancer located outside the gland.

Your doctor may remove the lymph nodes in the region and have a pathologist examine them under a microscope to see if they have any cancer cells in them.

In some situations it may be possible to remove the kidney, or part of it, using laparoscopic surgery. This involves surgery using a laparoscope (a thin, flexible tube with a light and magnifying lens at the tip) which enables the surgeon to look into the abdomen. The operation involves 2 small cuts made into the skin and muscle of the abdomen to allow the laparoscope and other instruments to be inserted. A larger cut, close to the belly button (navel), is needed to remove the kidney. This type of surgery gives a much smaller wound (incision).
Preparing for Surgery:
Getting Ready

What to Expect During Your Pre-admission Visit

Some time before your surgery, you will be asked to come to Roswell Park for a preadmission visit. During that visit, you may receive tests and exams, including:

- blood tests
- chest x-ray
- electrocardiogram (EKG)
- physical exam by your physician
- anesthesiologist assessment
- urology nurse assessment

What To Tell Your Doctor Before Surgery

Tell your doctor, anesthesiologist and nurse if you have:

- any allergies
- had problems with anesthesia, or have family members who have had problems with anesthesia
- a pacemaker. Please bring in the card you received from the pacemaker manufacturer that indicates the model number of your pacemaker
- a history of falls, problems with mobility, or difficulties in hearing or learning

Be sure to tell your doctor and the preadmission staff about all the medications you take, including:

- insulin
- heart and hypertension medicine
- non-prescription (over-the-counter) medications
- herbal or vitamin supplements

Blood Banking

You have the opportunity to donate 2 pints of blood to be used during surgery. This process is called autologous blood transfusion and takes about a month to complete. The blood needs to be drawn at least 7 days before surgery and no more than 4 weeks before surgery. If you interested, please discuss it with your nurse to do this

Medications

- Discontinue aspirin, Coumadin® (warfarin), and Plavix® (clopidogrel) 1 week prior to surgery.
- Discontinue all aspirin-like products (NSAIDs such as Advil®/ibuprofen) 48 hours prior to surgery.
Tell your doctor about all of the medications you routinely take at home, including:
- insulin
- heart and hypertension medicine
- non-prescription medications
- herbal or vitamin supplements

Exercises
Start both these exercises 1 week before your surgery
- Coughing and deep breathing exercises will help you clear and expand your lungs and help prevent pneumonia.
- Leg exercises will help prevent blood clots from forming in your legs. You will be asked to perform these exercises as part of your recovery after surgery.

Bowel Prep for the Day Before Surgery
- Drink clear liquids (Gatorade, clear soda, clear juices, and clear broths).
- Do not eat solid food or eat/drink any milk products.
- Addition clear liquids are encouraged to avoid dehydration.
- If possible, place your magnesium citrate in the refrigerator. It tastes better when chilled.
- At 8:00 am, drink 1 cup (8 ounces) of clear liquid every 15 minutes for a total of 32 ounces of clear liquids between 8:00 and 9:00 am.
- At 1:00 pm, drink ½ bottle of magnesium citrate.
- At 3:00 pm, drink the other ½ bottle of magnesium citrate with 3 cups (8 ounces each) of clear liquids.
- Between 10:00 am and 6:00 pm, drink 1 cup (8 ounces) of clear liquids every hours.
- From 7:00 pm to 12 midnight, additional clear liquids are encouraged. Drink at least 4 more cups (8 ounces each) of clear liquids before midnight.
- After 12:00 midnight, do not eat or drink anything. If you need to take any medications, you may take them with a sip of water.
- You may brush your teeth and rinse with mouthwash, just be sure to avoid swallowing any water or mouthwash.
- Take any medications approved by your anesthesiologist with a very small amount of water.
Preparing for Surgery: Breathing Exercises (Spirometer)

Introduction
Coughing and deep breathing exercises will help you clear and expand your lungs and help prevent pneumonia. They will also help you recover from surgery more quickly. Please practice them before you go to surgery.

Incentive Spirometer: Deep Breathing Exercise
- Place the mouthpiece in your mouth.
- Draw in air as if you were sipping liquid through a straw.
- Do this 10 times every 2 hours.
- Holding 1 ball up for 10 seconds is better than getting 2 balls up for 1 second. Try to hold the balls up by taking slow, deep breaths.

Coughing and Deep Breathing
- Take a deep breath through your nose to filter, warm and moisten the air.
- Hold your breath for a short time.
- Exhale slowly and gently through pursed lips (as if you were blowing out a candle).
- Do this for 3 breaths. On the 3rd breath, cough instead of breathing out.
- Repeat this deep breathing 2 more times.
Preparing for Surgery: 
Leg Exercises

Introduction

Leg exercises are important in helping to prevent the formation of blood clots in your legs following surgery. These exercises will help you recover from surgery more quickly. Please practice them before you go to surgery.

Leg Exercises

With your legs straight, first point your toes down. Then bring your toes up towards your head.

Do these exercises 10 times every hour with one foot and then the other foot.

With your legs straight, rotate your ankles one at a time as if you were drawing little circles with your toes.

Do this exercise 10 times with one foot and then the other foot.
Preparing for Surgery: Clear Liquid Diet

Day Before Your Surgery

Drink only a clear liquid diet the day before your surgery. Liquids that you can see through at room temperature (about 78-72°F) are considered clear liquids.

**Beverages**

- Soft drinks (orange, ginger ale, cola, lemon/lime, etc.)
- Gatorade or Kool-Aid
- Strained fruit juice without pulp (apple, grape, orange, lemonade)
- Water, flavored waters, tea or coffee (may add sugar but NO milk or creamers)

**Soups**

- Chicken or beef broth or bouillon – no added meat, noodles or vegetables

**Desserts**

- Hard candy
- Jell-O (no fruit toppings or whipped cream)
- Popsicles or lemon ice (no sherbets, sorbets, or fruit bars)
The Day of Your Surgery: Before Your Operation

Before Leaving Home

You may brush your teeth and rise with mouthwash, however, avoid swallowing any water or mouthwash.

Take only the medications approved by your anesthesiologist with a small amount of water.

Bring the following items with you to the hospital:

- A list of your medications
- Your Healthcare Proxy and Living Will or Advanced Directive. If you don’t have one, speak with your nurse or Patient Access staff member when you register. They will be able to help you.

Do not bring:

- money or credit cards
- jewelry or other valuables

If you forget and bring a valuable item, give it to family or friends for safekeeping. Otherwise, ask the registration clerk for assistance.

At the Hospital—When to Arrive, Where to Go

Please make certain to arrive at the hospital promptly at the time you were assigned.

Once you have arrived, go to the Patient Access Department (Registration) located in the hospital lobby on the ground floor. A Patient Access staff member will direct you where to go next.

In the Surgical Center

- Tell your nurse if you have any allergies, particularly to seafood or iodine (the skin cleanser used prior to the surgery contains iodine).
- A staff member will attach an ID bracelet to your arm and give you a hospital gown to put on. These are the only things you can wear to the operating room.
- Make sure you are not wearing anything that might come off during surgery, such as dentures or partial plates, eyeglasses or contact lenses, jewelry, wigs, or a removable prosthesis such as an artificial eye or leg.
- A nurse will take your vital signs (pulse, respiration, blood pressure, and temperature) and review your medical history.
- An IV (intravenous tube) containing saline solution will be placed in a vein in your arm.
You will be helped onto a stretcher and transferred to the Holding Area. There, a staff member will confirm your identification by reading your ID bracelet. You will then be transferred to the Operating Room.

While you are in the operating room, your family may wait in one of our surgical waiting areas. Your physician will speak with them when surgery is completed.

In the Operating Room

The staff in the OR will be wearing uniforms, masks, and caps to protect you from infection.

- Your arms and legs will be gently secured for your safety.
- If you feel cold, ask for a blanket.
- An anesthesiologist or nurse anesthetist will monitor you while you are under anesthesia.
- A blood pressure cuff will be put on your arm.
- An EKG machine will monitor your heart rate.
- Medications will be given through your IV to make you sleep.
- While you are sleeping, a tube will be put in your throat to help you breathe.
- Your skin will be scrubbed with a special soap called Betadine. This skin preparation will reduce your chance of getting an infection. The reddish color will wash away without staining your skin.
- A Foley catheter will be inserted.
- When the procedure is over, you will be moved to the PACU (Post anesthesia Care Unit).
The Day of Your Surgery: After Your Operation

What to Expect In the Recovery Room (PACU)

In the recovery room, you will be watched closely and cared for until the effects of your anesthesia have worn off. Most likely this is where you will wake up after your surgery.

When you awake, you may find that your vision is blurry. This is caused by the medicine used to protect your eyes during surgery. The blurriness will go away in a short time.

You may also:

- receive extra oxygen through a thin tube (nasal cannula) that passes into your nose
- have a Foley catheter to drain your urine into a collection bag.
- have a Jackson-Pratt (JP) drain to drain excess fluid from your body
- have special stockings called Sequential Compression Devices (SCDs) that intermittently squeeze your legs to help prevent blood clots and assist your circulation
- have an IV in place. Let your nurse know if you notice any swelling, redness, or irritation at your IV site.
- have a dressing over your incision
- have a nasogastric (NG) tube in your nose to help prevent bowel complications while you recover. The NG tube will be removed when your bowel function returns.

What to Expect Back in Your Room

When you are stable, you will be brought to the primary nursing unit for urology. The nurses on this unit are trained to care for patients who have had urological procedures.

- Your room will be ready for your arrival after surgery. There will be a bed, a small cabinet, a closet, and a bathroom available for you.
- Your nurse will tell you about the hospital routine and check your temperature, pulse, and blood pressure frequently.
- You will still be wearing Sequential Compression Device Stockings that will intermittently squeeze your legs to help prevent blood clots and generally aid with your circulation. These will be removed when you are ready to get up and move around.
- To help you recover quickly, and to prevent complications such as blood clots, the nurses will help you get out of bed the evening of your surgery. The morning after your operation, they will help you take walks down the hall until you can manage on your own.
• You will be asked to begin breathing exercises using an *incentive spirometer* to help you prevent pneumonia and other respiratory complications. Your nurse will review the instructions for using the spirometer and ask you to perform the breathing exercises every hour while you are awake.

• You will begin to move from a liquid diet to more substantial foods as you recover. This most likely will take several days.

**How to Manage Your Pain**

• You can have medicine that will help relieve or decrease your pain so that you can move around more easily and recover faster.

• Let your nurses know if you are feeling pain or if the medication given to you is helping (or not helping) the pain. It is important for them to know if you are having any other reaction to the medication in addition to pain relief. Many pain medicines are available, and this information will help your doctor prescribe the best one for you.

**What You Can Eat or Drink**

You will begin to move from a liquid diet to more substantial foods as you adjust. This may take a couple days.

**When to Call Your Nurse**

Tell your nurse if you experience:

• pain
• nausea
• difficulty breathing
• chills
• fever
• pain, redness, or puffiness at your IV site
Discharge: Caring for Yourself at Home

About Your Discharge
Your doctor will determine when you are able to go home. A nurse or other member of your health care team will give you the following:

- **Written discharge instructions:** Don’t hesitate to ask your doctor, resident, fellow, or any one else on your health care team for additional help or information.

- **A prescription for pain medicine:** You also may receive stool softener medication and be told to take iron supplements to rebuild your red blood cell count.

- **An appointment for your first follow up visit:** You will receive instructions when to call your doctor to schedule that appointment.

General Instructions
Each day following your surgery, you will feel better. Here’s is a guide to some general instructions for you to follow to aid in your recovery:

Activity
- If you have no dressing on your incision, clean it daily with soap and water.
- Increase your activity each day. You may walk outdoors and use the stairs.
- When sitting, prop your feet up on a stool or sit on a recliner to keep your feet elevated and prevent swelling in your lower legs. If swelling occurs, lie in bed and raise your feet on pillows higher than your head.
- Do not resume driving until your doctor tells says you can.
- Do not lift anything heavier than 5 pounds (for example, a 6-pack of soda) until your doctor says you can.
- Continue to do your incentive spirometer breathing exercises each hour while you are awake.

Diet
- Return to your usual diet. Eat foods high in fiber like bread and cereal from whole grains, raw fruit and vegetables with the skin on to prevent constipation.
- Drink 5-6 glasses of water or juice everyday.
Medicine to Take at Home

- Prescription medications may include Lortab (Hydrocodone/APAP) for pain
- Over the counter medications may include Colace and Tylenol
- Maximum combined total of acetaminophen (Tylenol) and/or hydrocodone/acetaminophen (Lortab) is 8 tablets per day
- Take only medicine ordered or approved by your doctor

When to Call Your Doctor

- Your temperature is above 101°F or you have shaking chills
- You have unusual pain in your belly or kidney area (mid back) that is not helped by pain medication
- Your incision becomes red, swollen, painful, feels hot to the touch, or has pus or foul smelling drainage from it
- Your urine is bloody with large blood clots in it (larger than 1/4 inch) or is cloudy or foul smelling
- You are vomiting for longer than 24 hours
- You have diarrhea (loose stools 3x a day) lasting more than 24 hours
- You have new swelling in your legs

Seek Help Immediately If:

- you suddenly have trouble breathing or start having chest pain.
- you develop severe pain in your abdomen.
- you have a change in your level of consciousness, vision or strength.

Roswell Park does not have an emergency department. If you live in the Buffalo area and find yourself in an emergency, we would like to ask you to go directly to Buffalo General Hospital, which is adjacent to Roswell Park. We have a cooperative relationship with Buffalo General and they will take care of you and contact your Roswell Park doctor to coordinate your care. Please bring your green Roswell Park identification card to Buffalo General so they know you are a Roswell Park patient.

If you live outside of the Buffalo area, please go directly to your nearest hospital emergency department.
Follow-up Visits

4 Weeks After Your Surgery

- At your first visit after your surgery your pathology report should be available to discuss with your doctor.
- Your doctor will check your vital signs, bladder, bowel function, and incision healing.
- Keep a list of any problems or questions you have before this appointment so you can discuss them with your doctor.
- Please discuss with your doctor any pain you are still experiencing so you can work out a pain management plan.
- You may be referred to another physician, including a Medical Oncologist or Radiation Oncologist at Roswell Park depending on your pathology report and the treatment plan you discuss with your doctor.

4-6 Months After Your Surgery

At this follow up visit you can expect to have:

- a CT scan
- a physical examination that includes checking bladder and bowel function
- a comprehensive metabolic panel (CMP) blood test (e.g., blood, urea nitrogen, serum creatinine, calcium levels, LDH, liver function tests)

Keep a list of any problems or questions you have before this appointment so you can discuss them with your doctor.

Please discuss with your doctor any pain you are still experiencing so you can work out a pain management plan.

Every 6 Months

At these clinic visits, you will continue to receive:

- a CT scan
- a physical examination that includes checking bladder and bowel function
- a comprehensive metabolic panel (CMP) blood test
Hydrocodone/APAP

Other Names
Lortab®, Anexsia®, Co-gesic®, Lorcet-HD®, Norco®, Panacet®, Vicodin®, and Zydone®

How is it Administered?
The combination of acetaminophen and hydrocodone comes as a tablet, capsule, or liquid to take by mouth.

What is it Used For?
This combination of drugs is used to relieve moderate to moderately-severe pain.

What Should I Tell My Doctor Before I Begin Taking Lortab®?
Tell your doctor:

- if you are allergic to acetaminophen, codeine, hydrocodone, sulfa, or any other drugs
- what prescription and nonprescription medications you are taking, especially acetaminophen (Tylenol®), antidepressants, medications for colds or allergies, pain relievers, tranquilizers, and vitamins
- if you have or have ever had liver or kidney disease, a history of alcoholism, lung disease, or thyroid disease

This drug may interact with other medications, changing their effectiveness or causing harmful side effects. Tell your doctor and pharmacist about any prescription or over-the-counter medications, vitamins, herbal or diet supplements that you are taking.

How Should I Use Lortab®?
- Your doctor will tell you how much of this medicine to use and how often. Do not use more medicine than your doctor tells you.
- Take this medicine on an empty stomach. If it upsets your stomach, it may be taken with food.
- Do not take extra Tylenol® or acetaminophen when taking Lortab® since Lortab® has acetaminophen in it.
- Do not use extra medicine to make up for a missed dose.
What Are Some Possible Side Effects I May Experience?

Although side effects from acetaminophen and hydrocodone are not common, they can occur. Tell your doctor if any of these symptoms are severe or do not go away:

• lightheadedness or dizziness
• drowsiness
• upset stomach, stomach pain, or vomiting
• constipation
• rash or itching
• difficulty urinating

When Should I Call the Doctor?

Call your doctor immediately if you experience:

• difficulty breathing
• mood changes

What Else Should I Know About Lortab®?

• Too much acetaminophen may cause liver damage. Do not take more than 4000 mg of acetaminophen per day.
• Do not let anyone else take your medication. Ask your pharmacist any questions you have about refilling your prescription.
• Do not drink alcohol while taking Lortab®.
• Avoid driving or operating any machinery.
Stool Softeners

Brand Names
Colace®, Dialose®, docusate, DOS®, Fleet Sof-Lax®, Hemaspan®

How Are They Administered?
Stool softeners come as a capsule, tablet, liquid, and syrup.

What Are They Used For?
Stool softeners are used on a short-term basis to relieve constipation by people who should avoid straining during bowel movements. They soften stools, making them easier to pass.

What Should I Tell My Doctor Before I Begin Taking Stool Softeners?
Tell your doctor:
- if you are allergic to any drugs
- what prescription and nonprescription medications you are taking, especially aspirin and vitamins. Do not take mineral oil while taking stool softeners

How Should I Take Them?
Follow the directions on the package or your prescription label carefully. Take stool softeners exactly as directed by your doctor.
One to three days of regular use usually are needed for this medicine to take effect. Do not take stool softeners for more than 1 week unless your doctor directs you to.

What Are Some Possible Side Effects I May Experience?
Although side effects from stool softeners are not common, they can occur. Tell your doctor if you experience any of these symptoms:
- stomach or intestinal cramps or upset stomach
- throat irritation (from oral liquid)
- vomiting

When Should I Call My Doctor?
Call your doctor immediately if you experience:
- skin rash (hives)
- difficulty breathing or swallowing
- fever
Acetaminophen

Brand names
Tylenol®, Anacin-3®, Datril®, Liquiprin®, Panadol®, Tempra®

How is it Administered?
Acetaminophen comes as a tablet, chewable tablet, capsule, liquid, drops, and granules (to be dissolved in water) to take by mouth.

What is it Used For?
Acetaminophen is used to relieve mild to moderate pain and to reduce fever.

What Should I Tell My Doctor Before I Begin Taking It?
Tell your doctor:
- if you are allergic to acetaminophen or any other drugs
- what prescription and nonprescription medications you are taking, especially carbamazepine (Tegretol®), phenobarbital, phenytoin (Dilantin®), rifampin (Rifadin®, Rimactane®), sulfinpyrazone (Anturane®), and vitamins
- if you have or have ever had liver disease and if you have a history of alcohol abuse
- if you drink 3 or more alcohol beverages every day, ask your doctor if you should take acetaminophen. You should not drink alcohol beverages while taking acetaminophen

What Are Some Possible Side Effects I May Experience?
Although side effects from acetaminophen are not common, they can occur. Tell your doctor if you experience a severe or persistent upset stomach.

If you experience any of the following, call your doctor immediately:
- any sign of an allergic reaction: rash, hives, or severe skin rash; difficulty breathing or shortness of breath; swelling of your lips, throat, or inside of your mouth; dizziness or fainting
- any sign of an overdose: unusual bruising or bleeding (such as bleeding that lasts more than 10-15 minutes); black or bloody stools; vomit that is bloody or looks like coffee grounds; blood in your urine or mucus; spontaneous bleeding from your gums or nose; superficial bleeding into the skin that appears as a rash of pinpoint-sized reddish-purple spots; decrease in amount of urine passed; nausea and/vomiting; fever or sore throat; yellowing of the skin or eyes
At the CCRC, located on the first floor of the hospital and accessible through the Sunflower Café (cafeteria), trained cancer information specialists provide appropriate, accurate, and up-to-date information on cancer screening, prevention, diagnosis, treatment, clinical trials and supportive care.

The CCRC’s services include:

- yoga, meditation, and teleconferences
- public computers with Internet access
- wig, hat and scarf boutique
- free publications from the National Cancer Institute, American Cancer Society, and other reputable organizations
- referrals, both local and national, for support groups, information, etc.
- lending library of books, movies, CDs (CD players), and audiobooks
- laptops available for loan to patients staying in Roswell Park. To sign out a laptop, the patient must be 18 years of age and have a driver’s license.

If you are interested in borrowing a laptop or for more information about our services, please contact the CCRC at (716)-845-8659 or 1-877-ASK-RPCI (1-877-275-7724).

The Department of Psychology offers psychological support of cancer patients and their families. Our clinical services include:

- comprehensive evaluation of psychological functioning
- individual, couples, and family medical psychotherapy
- referral to psychology and psychiatry services, if needed

For more information on these services, contact the Psychology Department at (716) 845-3052 or ask your nurse or provider for a referral.

Our licensed Clinical Social Workers and licensed Masters Social Workers are available to assist you and your family members in adapting to the stresses related to your diagnosis including:

- counseling services
- support groups
- health care proxy
- finances
- housing
- transportation
- community resources
- locating rehabilitation facilities.

For more information on any of these services, please call the Social Work office at (716) 845-8022.

Pastoral Care

Hospital Chaplains of the Catholic, Protestant and Jewish faith traditions are available for bedside visitation, counsel, consultation, and spiritual guidance. Clergy of other faith traditions are available to the Chaplains for consultation and visitation. Other pastoral care staff members are in house 7 days a week for distribution of Holy Communion for Catholic and Protestant patients as well as for visitation. Catholic and Protestant services are held regularly in the hospital chapel, located in the main hospital, room 1403. For more information call the Pastoral Care Department at (716) 845-8051.

American Cancer Society (ACS)

The ACS offers many services to those with cancer, as well as their caregivers and loved ones:

- **Support Groups**: I Can Cope® and Look Good…Feel Better®
- **Mary’s Room**: Women in active cancer treatment can get a new, free wig
- **Road to Recovery**: Transportation to and from treatment facilities
- **Hope Lodge®**: Free housing for patients and their families
- **Website**: [www.cancer.org](http://www.cancer.org) includes the Cancer Survivor’s Network® (a virtual community), news, and resources
- **24-hour Information line**: Trained cancer information specialists 24/7 @ 1-800-ACS-2345

For more information on any of these services, call the local ACS office in Amherst, NY at (716) 689-6981.

Cancer Wellness Center

The Cancer Wellness Center is a wellness community for those touched by cancer offering services including education and emotional support. The **Cancer Coach Program** provides support and encouragement to cancer patients and their loved ones through trained volunteers who have recovered from similar cancer diagnoses. A Cancer Coach knows what you are going through and can help you face your situation with less fear and more courage. **Spirituality and Healing programs** meet monthly at Daemen College. The programs provide significant support for those whose lives have been touched by cancer.

For more information on these programs, call the Cancer Wellness Center at (716) 694-1395.
Gilda’s Club WNY provides a place where people whose lives have been touched by cancer can join with others for social and emotional support as a supplement to their medical care. There are activities for men and women as well as Noogieland for children and teens, free of charge and non-profit.

Gilda’s Club offers support and networking groups, lectures, workshops, and social activities. Gilda’s Club WNY is located at 1140 Delaware in Buffalo. For more information, please call (716) 332-5900.

Websites

- **Roswell Park Cancer Institute**
  [www.roswellpark.org](http://www.roswellpark.org)
  Information on Roswell Park, our healthcare team, general cancer information, support services and a clinical trial search tool.

- **National Comprehensive Cancer Network:** [www.nccn.org/patients](http://www.nccn.org/patients)
  The NCCN is an alliance of 21 of the world’s leading cancer centers, working together to develop treatment guidelines for most cancers, and dedicated to research that improves the quality, effectiveness and efficiency of cancer care. NCCN offers programs to help you and your family make informed decisions about your health.

- **National Cancer Institute:** [www.cancer.gov](http://www.cancer.gov)
  The National Cancer Institute coordinates the National Cancer Program, which conducts and supports research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer, rehabilitation from cancer, and the continuing care of cancer patients and the families of cancer patients.

- **Nutrition in Cancer Care**
  Information from the National Cancer Institute on cancer treatments and nutrition-related side effects.

- **MedlinePlus®** [www.medlineplus.gov](http://www.medlineplus.gov)
  This Web site from the National Library of Medicine (NLM) brings together authoritative information from NLM, the National Institutes of Health (NIH), other government agencies and health-related organizations. MedlinePlus® contains an illustrated medical encyclopedia.

- **Cancer Care** [www.cancercare.org](http://www.cancercare.org)
  This organization provides access to telephone support groups for free and moderated by a professional oncology social worker from CancerCare’s staff. They also offer free counseling services online or in person for those who need one-on-one support.

- **People Living with Cancer** [www.cancer.net/portal/site/patient](http://www.cancer.net/portal/site/patient)
  The patient information Web site of the American Society of Clinical Oncology (ASCO). With nearly 25,000 members in the United States and abroad, ASCO is the world's leading professional organization representing physicians of all oncology subspecialties who care for people with cancer. PLWC provides timely, oncologist-approved information to help patients and families make informed health-care
decisions, including information on bladder cancer. They also offer additional general information on lab tests, diagnostic testing and imaging, pathology, etc.

- **Cancer Hope**  [www.cancerhopenetwork.org](http://www.cancerhopenetwork.org)
A not for profit organization that provides free, confidential, one-on-one support to people with cancer and their families. They match patients with trained volunteers who have themselves undergone a similar experience.

- **Fertile Hope**  [www.fertilehope.org](http://www.fertilehope.org)
Fertile Hope is a national nonprofit organization dedicated to providing reproductive information, support and hope to cancer patients whose medical treatments present the risk of infertility.

- **Kidney Cancer Association (KCA)**  [www.kidneycancerassociation.org](http://www.kidneycancerassociation.org)
The KCA is a charitable organization made up of patients, family members, physicians, researchers, and other health professionals globally that fund, promote, and collaborate on research projects, provide education to families and physicians, and advocate for patients at the state and federal levels.

- **National Kidney Foundation (NKF):**  [www.kidney.org](http://www.kidney.org)
The National Kidney Foundation is a nonprofit health organization dedicated to preventing kidney and urinary tract diseases and improving the health and well-being of individuals and families affected by kidney disease.