



## JAMES BUCHANAN BRADY UROLOGICAL INSTITUTE LAPAROSCOPIC RETROPERITONEAL LYMPH NODE DISSECTION (RPLND)

### OVERVIEW

Laparoscopic Retroperitoneal Lymph Node Dissection (RPLND) provides patients with a safe and effective way to remove retroperitoneal lymph nodes in patients with testicular cancer. Laparoscopic RPLND is a minimally invasive technique, which provides patients with less discomfort when compared to the traditional open surgery.

Laparoscopic RPLND has resulted in significantly less post-operative pain, a shorter hospital stay, earlier return to work and daily activities, a more favorable cosmetic result and outcomes similar to that of open surgery.

Testicular cancer is one of the success stories in the treatment of malignant tumors. Advances in diagnostic x-rays, radiation, and chemotherapy allow for a cure in the majority of cases. Testicular cancer usually spreads in a predictable manner, going first to the lymph nodes, located behind the major organs in the abdomen.

When testes cancer is detected, removal of the testicle (orchiectomy) is first performed. This gives important information regarding the type of cancer and the risk that it may have spread. Blood work including, AFP (Alpha-fetoprotein), Lactic Dehydrogenase (LDH) and Quantitative HCG (Human Chorionic Gonadotropin) are done along with a chest x-ray and an abdominal CT scan to determine the stage of the disease and the best treatment option. Treatment options (depending on the stage and type of cancer) include

1. Surveillance
2. RPLND
3. Chemotherapy
4. Radiation

Your surgeon has determined with you that RPLND is the next step in the management of your testes cancer.

### OUR SURGEONS

**Mohamad E. Allaf, MD**



**Office:** 410-502-7710  
**Appointments:** 410-955-6100  
**Fax:** 410-502-7711  
**Email:** [mallaf@jhmi.edu](mailto:mallaf@jhmi.edu)

**Edward M. Schaeffer, M.D., Ph.D.**



**Appointments:** 410-502-3143  
**Email:** [eschaef4@jhmi.edu](mailto:eschaef4@jhmi.edu)

## APPOINTMENTS

**Johns Hopkins Hospital Patients** and **Johns Hopkins Bayview Medical Center Patients** please use the phone numbers listed above.

In the event of an emergency and you need to contact someone in the evening hours or on the week end, please call the paging operator at **410-955-6070** (for Johns Hopkins Hospital Patients) or **410-550-0100** (for Johns Hopkins Bayview Medical Center Patients) and ask to speak to the urologist on call.

For **directions to Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center** please use this link <http://ueology.jhu.edu/patients/>

## PRIOR TO THE SURGERY

### What to expect during you preoperative consultation

During your initial consultation with your surgeon, he will review your medical history as well as any outside reports, records, and outside Xray films (e.g. CT scan, MRI, sonogram). A brief physical examination will also be performed at the time of your visit. If your surgeon determines that you are a candidate for surgery, you will then meet with a Patient Service Surgery Coordinator to arrange for the date of your operation.

**NOTE: It is very important that you gather and bring all of your Xray films and reports to your initial consultation with your surgeon.**

### What to expect prior to the surgery

Since insurance companies will not permit patients to be admitted to the hospital the day before surgery to have tests completed, you must make an appointment to have pre-operative testing done at your family doctor or primary care physician's office within 1 month prior to the date of surgery.

These results need to be faxed by your doctor's office to the Pre-operative Evaluation Center at **443-287-9358** two weeks prior to your surgery. Please call The Documentation Center at **410-955-9453** two weeks before your surgery date to confirm that this information was received..

Once your surgical date is secured, you will receive a form along with a letter of explanation to take to your primary care physician or family doctor in order to have the following pre-operative testing done prior to your surgery.

- Physical exam
- EKG (electrocardiogram)

- CBC (complete blood count)
- PT / PTT (blood coagulation profile)
- Comprehensive Metabolic Panel (blood chemistry profile)
- (AFP) Alpha-fetoprotein (blood work)
- (HCG) Human Chorionic Gonadotropin (blood work)
- (LDH) Lactic Dehydrogenase
- Urinalysi
- Chest x-ray
- CT scan of the abdomen

## Preparation for surgery

### Medications to Avoid Prior to Surgery

Aspirin, Motrin, Ibuprofen, Advil, Alka Seltzer, Vitamin E, Ticlid, Coumadin, Lovenox, Celebrex, Voltaren, Vioxx, Plavix and some other arthritis medications can cause bleeding and **should be avoided 1 week prior to the date of surgery** (Please contact your surgeon's office if you are unsure about which medications to stop prior to surgery. Do not stop any medication without contacting the prescribing doctor to get their approval).

### Bowel Preparation and Clear Liquid Diet

Do not eat or drink anything after midnight the night before the surgery and drink one bottle of Magnesium Citrate (can be purchased at your local pharmacy) the evening before your surgery.

Drink only clear fluids for a 24-hour period prior to the date of your surgery. Clear liquids are liquids that you are able to see through. Please follow the diet below.

### Clear Liquid Diet

Remember not to eat or drink anything after midnight the evening before your surgery. Clear liquids are liquids that you are able to see through. Please follow the diet below.

- Water
- Clear Broths (no cream soups, meat, noodles etc.)
  - Chicken broth
  - Beef broth
- Juices (no orange juice or tomato juice)
  - Apple juice or apple cider
  - Grape juice

- Cranberry juice
  - Tang
  - Hawaiian punch
  - Lemonade
  - Kool Aid
  - Gator Aid
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- Tea (you may add sweetener, but no cream or milk)
  - Coffee (you may add sweetener, but no cream or milk)
  - Clear Jello (without fruit)
  - Popsicles (without fruit or cream)
  - Italian ices or snowball (no marshmallow)

## THE SURGERY

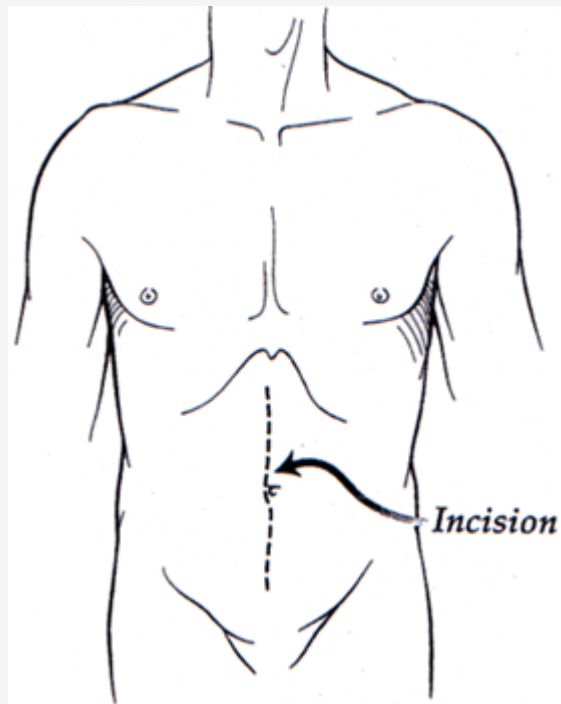
### The Operation

The length of the operation is typically 3-5 hours. The surgery is performed through 3 - 4 small (1 cm) incisions created in the midline of the abdomen. Lymph nodes are removed on the side of the testicular cancer. Using a small telescope and other instrumentation, the lymph tissue that drains the testicle is removed.

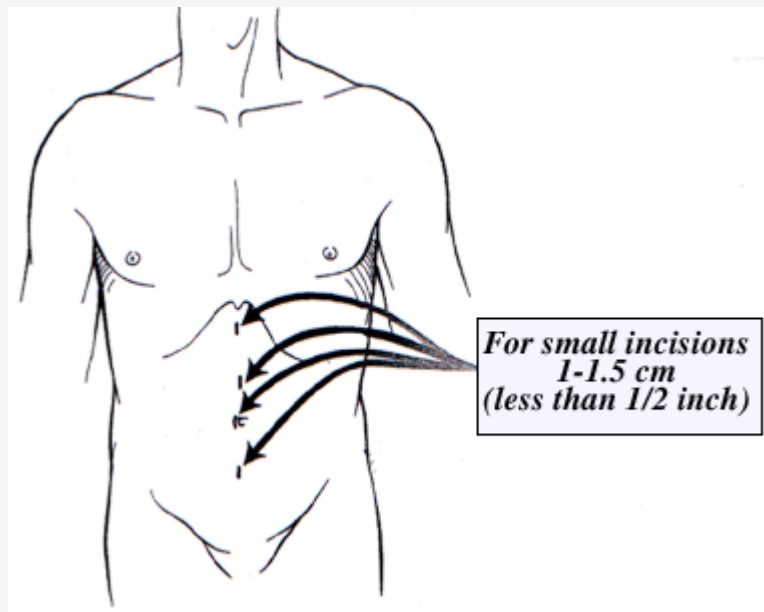
The number of lymph nodes to be removed can vary among individuals and can range from less than 10 to over 50. Lymph nodes are part of the immune system, which help in fighting off infection.

The relative number of lymph nodes removed during RPLND are not enough to affect your immune system or your body's ability to fight off infection. Along with the removal of the lymph nodes the remainder of the blood supply to the affected testicle and spermatic cord is also removed.

### Open Procedure



### **Laparoscopic Procedure**



## Potential Risks and Complications

Although this procedure has proven to be very safe, as in any surgical procedure there are risks and potential complications. The safety and complication rates are similar when compared to the open surgery. Potential risks include:

- **Bleeding:** Blood loss during this procedure is possible, however, a blood transfusion is rarely needed. If you are interested in autologous blood transfusion (donating your own blood) you must make your surgeon aware. When the packet of information is mailed to you regarding your surgery, you will receive an authorization form for you to take to the Red Cross in your area.
- **Infection:** All patients are treated with intravenous antibiotics, prior to starting surgery to decrease the chance of infection from occurring after surgery. If you develop any signs or symptoms of infection after the surgery (fever, drainage from your incisions, urinary frequency/discomfort, pain or anything that you may be concerned about) please contact us at once.
- **Tissue / Organ Injury:** Although uncommon, possible injury to surrounding tissue and organs including bowel, vascular structures, spleen, liver, pancreas and gallbladder could require further surgery. Injury could occur to nerves or muscles related to positioning. Hernia at incision site is a possibility. Although very rare, the kidney and ureter on the side that the lymph nodes are being removed could be injured.
- **Hernia:** Hernias at incision sites rarely occur since all keyhole incisions are closed carefully at the completion of your surgery.
- **Conversion to Open Surgery:** The surgical procedure may require conversion to the standard open operation if difficulty is encountered during the laparoscopic procedure. This could result in a larger standard open incision and possibly a longer recuperation period.
- **Sperm Banking:** Patients should consider banking sperm prior to any treatment for their testis cancer, esp. chemotherapy because chemotherapy may effect sperm production by your remaining testicle. The return of sperm quality could take over one year following chemotherapy but may never return to normal levels.
- **Retrograde Ejaculation/Infertility:** Occasionally nerves that control ejaculation may be injured during surgery. This may result in retrograde ejaculation causing sperm to be expelled into the bladder instead of out the tip of the penis. As such, one may not see a discharge (i.e. ejaculate) with orgasm. The fluid will mix in the bladder with urine and be eliminated with the next urination. This condition is not dangerous and does not affect your ability to have erections or an orgasm. This could, however, affect future fertility.
- **Lymphocele:** Lymphatic fluid can collect in the area where the lymph nodes were removed. This could require drainage and further surgery.
- **Respiratory Complication:** If you received a chemotherapy medication called bleomycin before your surgery, you are at a slightly higher risk of lung complications during and following surgery.

## WHAT TO EXPECT AFTER SURGERY

## During your hospitalization

Immediately after the surgery you will be taken to the recovery room and transferred to your hospital room once you are fully awake and your vital signs are stable.

- **Post Operative Pain:** Pain medication can be controlled and delivered by the patient via an intravenous catheter or by injection (pain shot) administered by the nursing staff. You may experience some minor transient shoulder pain (1-2 days) related to the carbon dioxide gas used to inflate your abdomen during the laparoscopic surgery.
- **Nausea:** You may experience some nausea related to the anesthesia or pain medication. Medication is available to treat persistent nausea.
- **Urinary Catheter:** You can expect to have a urinary catheter draining your bladder (which is placed in the operating room while the patient is asleep) for approximately one day after the surgery.
- **Diet:** You can expect to have an intravenous catheter (IV) in for 1-2 days. (An IV is a small tube placed into your vein so that you can receive necessary fluids and stay well hydrated; in addition it provides a way to receive medication.) Most patients are able to tolerate ice chips and small sips of liquids the day of the surgery and regular food the next day. Once on a regular diet, pain medication will be taken by mouth.
- **Fatigue:** Fatigue is common and should start to subside in a few weeks following surgery.
- **Incentive Spirometry:** You will be expected to do some very simple breathing exercises to help prevent respiratory infections through using an incentive spirometry device (these exercises will be explained to you during your hospital stay). Coughing and deep breathing is an important part of your recuperation and helps prevent pneumonia and other pulmonary complications.
- **Ambulation:** On the day after surgery it is very important to get out of bed and begin walking with the supervision of your nurse or family member to help prevent blood clots from forming in your legs. You can expect to have SCD's (sequential compression devices) along with tight white stockings on your legs to prevent blood clots from forming in your legs.
- **Hospital Stay:** The length of hospital stay for most patients is for approximately 1-2 days.
- **Constipation/Gas Cramps:** You may experience sluggish bowels for several days following surgery as a result of the anesthesia. Suppositories and stool softeners are usually given to help with this problem. Taking a teaspoon of mineral oil daily at home will also help to prevent constipation. Narcotic pain medication can also cause constipation and therefore patients are encouraged to discontinue any narcotic pain medication as soon after surgery as tolerated.

## What to expect after discharge from the hospital

- **Pain Control:** You can expect to have some pain that may require pain medication for a few days after discharge, and then Tylenol should be sufficient to control your pain.
- **Showering:** You may shower after returning home from the hospital. Your wound sites can get wet, but must be patted dry immediately after showering. Tub baths are not recommended in the first 2 weeks after surgery as this will soak your incisions and increase the risk of infection. You will have adhesive strips across your incisions. They will fall off in approximately 5-7 days on their own. Sutures underneath the skin will dissolve in 4-6 weeks

- **Activity:** Taking walks is advised. Prolonged sitting or lying in bed should be avoided. Climbing stairs is possible but should be taken slowly. Driving should be avoided for at least 1- 2 weeks after surgery. Absolutely no heavy lifting (greater than 20 pounds) or exercising (jogging, swimming, treadmill, biking) for six weeks or until instructed by your doctor. Most patients return to full activity at home on an average of 3 weeks after surgery. You can expect to return to work in approximately 4 weeks.
- **Diet:** There are no dietary restrictions once you return home from your hospitalization.
- **Follow-up Appointment:** If your surgery is performed at Johns Hopkins Hospital, you will need to call the Johns Hopkins Out Patient Urology Clinic at **410-955-6707** after your surgery date to schedule a follow up appointment as instructed by your surgeon. If your surgery is performed at Johns Hopkins Bayview Medical Center please call **410-550-7008** to schedule a follow up appointment.
- **Pathology Results:** The pathology results from your surgery are usually available in one week following surgery. You may discuss these results with your surgeon by contacting him by phone or in your follow-up appointment in the office.
- **Long Term Follow-up:** Based on the pathology report of your lymph nodes, you may need additional treatment such as chemotherapy. You will need a CT scan, chest x-ray and blood work including Alpha-fetoprotein (AFP), Lactic Dehydrogenase (LDH) and human Chorionic Gonadotropin (HCG) periodically. The frequency of this testing can vary from patient to patient.