JAMES BUCHANAN BRADY UROLOGICAL INSTITUTE

PERCUTANEOUS ABLATION OF RENAL TUMORS

OVERVIEW

With the availability of modern x-ray testing, tumors are being found at smaller sizes and earlier stages. Studies have shown that local excision of small tumors with preservation of most of the kidney provides similar long term cure as does complete kidney removal. Over the past ten years technology has been developed that now allows destruction of tumors without having to physically remove the lesion. Extremes in temperature both heat and cold can kill tumor cells. Needles have been developed that can deliver heat or cold energy inside the body. It is now possible to destroy tumors within the body by using x-ray guidance to place these special needles. These needles freeze or heat the tissue to destroy tumors. The staff in Radiology and Urology at Johns Hopkins Medical Institutions had significant experience in developing these techniques and performing percutaneous tumor ablation.

SURGEONS

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APPOINTMENTS

For Appointments please use the phone numbers from 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 follow this link **http://urology.jhu.edu/patients/index.php**

PREPARING FOR THE PROCEDURE

Your physician will assess your imaging studies regarding size and location of the tumor to see if you are a candidate for ablation. The radiologist and urologist will help develop a plan for treatment. The procedure may require an overnight hospital stay. The only preparation is not to eat anything by mouth for eight hours prior to the surgery except medicine with sips of water. Any medication that can cause bleeding, including Aspirin, Motrin, Ibuprofen, Advil, Alka Seltzer, Vitamin E, Ticlid, Coumadin, Lovenox, Celebrex, Voltaren, Vioxx, Plavix, Naprosyn, Indocin, Celebrex, and Bextra, or any anti-inflammatory/arthritis medicines need to be discontinued five days prior to the procedure. You should discuss discontinuing any medicine with your family doctor to be sure it is safe to stop.

During your appointment in urology, your urologist will discuss your treatment options. If ablation is the option you choose, you will be scheduled for the procedure during your appointment in the Urology Clinic. The patient Service Coordinator will make these arrangements for you.

You will need blood work to be completed by your family doctor or primary care physician to include:

- History and Physical
- Basic Metabolic Panel
- CBC
- PT/PTT
- Platelets
- Urinalysis

If your procedure is being done at Johns Hopkins Bayview Medical Center, your doctor should fax this blood work to the radiology nurse station:
Fax #: **410-550-8188.**

Please call prior to your appointment
Telephone #: **410-550-5731** to verify receipt of lab work.

Day of Arrival (Johns Hopkins Bayview Patients)

You will be instructed as to what time to arrive at the first floor Radiology Suite at the Johns Hopkins Bayview Medical Center, 4940 Eastern Ave. You will need to bring all of your x-ray films with you. On arrival to Radiology (imaging front desk) you will be registered and you will change into a hospital gown. The nursing staff will begin an IV (intravenous) in your arm through which medicine to help you relax and relieve any discomfort will be given.

If your procedure is being done at Johns Hopkins Hospital, your doctor should fax this blood work to the radiology nurse station:
Fax# : **410-614-2835**
Telephone # : **410-502-2835**

Day of Arrival (Johns Hopkins Hospital Patients)

You will be instructed as to what time to arrive at Johns Hopkins Hospital Blalock 5th floor, CVDL (Cardio Vascular Diagnostic Lab). You will need to bring all of your x-ray films with you. On arrival to CVDL, you will be registered and you will change into a hospital gown. The nursing staff will begin an IV (intravenous) in your arm through which medicine to help you relax and relieve any discomfort will be given.

THE PROCEDURE

Once you have spoken to the doctors and have signed the consent form, you will be brought into a CT scanning room. You will be placed on the table lying on your stomach. Your head will be on a pillow and your arms will be

outstretched in front of you. You will be placed into the CT scanner which is a doughnut shaped tube with your head protruding from one end and your lower chest and abdomen inside the scanner. You will be attached to a heart monitor and a monitor which will measure your blood pressure and blood oxygen content. Medicine will be given intravenously to help you relax and alleviate any pain during the procedure. A cleansing solution will be applied to your back and x-rays will be taken to assess the location of the tumor. A small needle stick will be given in your skin over your back to numb the skin and underlying tissue for the procedure.

The procedure should take between one and two hours. Anywhere from one to eight punctures may be made into the back to adequately place needles within the tumor to destroy the lesion. Once the needles are in place and the machine is turned on to destroy the lesion, you may have some increased discomfort. Intravenous medicine will be administered to help you. When the procedure is finished, the needle will be removed and band-aids applied. A final scan will be taken to make sure there is no bleeding around the kidney. If there is significant bleeding you my need to be admitted to the hospital for observation and possible blood transfusion.

Potential Risks and Complications

The risks of the procedure include bleeding which may require blood transfusion, infection, injury to the kidney with loss of kidney or kidney function, injury to bowel and all of the surrounding structures including the lungs, spleen, and liver. Nerve injury may occur which could cause tingling or numbness or even a muscle bulge in your flank (side). You could develop an allergic reaction to some of the intravenous dye or medicine given during the procedure. There is minimal risk of death, stroke, heart attack or blood clot. After surgery if you develop severe pain or begin developing high fevers or light headedness you should contact your doctor.

On occasion, if a tumor is not completely ablated, one may require additional treatment. Your doctor will order x-ray studies several months after the procedure to assess the effectiveness of the ablation. It is important to understand the follow up plan with your doctor to get the correct testing done.

WHAT TO EXPECT AFTER PROCEDURE

After the procedure you will be brought to the recovery area to be sure that you are comfortable. Once you are able to eat and urinate without difficulty, you will be discharged home. You should take it easy for the remainder of the day.

Most patients are able to resume full activities the day after the procedure. If you were on any blood thinner medicine that you discontinued prior to the surgery, you should wait 48 hours before restarting. If there is persistent blood in the urine you should contact your physician prior to restarting these medicines.