Introduction to This Guide

Each year, 165,000 people in the United States are diagnosed with lung cancer.* Sometimes, the disease occurs first in the lungs and is called primary lung cancer. In other cases, a tumor may develop in the lung due to the spread of cancer from another part of the body - a process called metastasis. In either case, a variety of approaches have been developed to treat the disease. You and your doctors have selected an approach which uses a technology called radiofrequency ablation to destroy cancer cells in the lung.

Radiofrequency ablation is a procedure that is well tolerated by most patients. This guide was designed to provide some answers to questions you may have about your procedure. Remember to call your doctor or nurse with any specific questions and always follow the instructions that they give you.


About Radiofrequency Ablation

What is Radiofrequency Ablation?
Radiofrequency ablation (RFA) uses radiofrequency energy, a form of electrical current that can be used safely in the body. The radiofrequency energy is supplied by a generator which is attached to a device called a needle electrode.

First, the needle electrode is positioned within the tumor and opened allowing the multiple tines to spread out.
Then, the generator is turned on and the radiofrequency energy is passed from the tines of the electrode into the tumor. The energy creates heat which destroys the cells in the area.

The result is destruction (ablation) of the lung tumor. After a period of time, the lung absorbs the destroyed tumor cells.

Is RFA an experimental procedure?
No, it is not. Destruction of tissue, using heat, is a proven treatment approach that has been used for many years. Your physician will be using the RF 3000® Radiofrequency Ablation System, comprised of two components: LeVeen® Needle Electrodes and the RF 3000 Radiofrequency Generator. The LeVeen Needle Electrode and the RF 3000 Generator are designed to allow the radiofrequency energy to be evenly distributed within the liver tissue for complete destruction of the tumor.

About the Procedure

How is the RFA procedure done?
The procedure can be done in a variety of ways. RFA can be performed percutaneously - “through the skin.” In this technique, the LeVeen® Electrode is inserted through a small puncture in the chest. RFA can also be done using a minimally invasive surgical technique called laparoscopy. For laparoscopic RFA, tiny incisions are made in the chest wall. A small camera called a laparoscope is inserted through one incision. The surgeon uses the camera to guide placement of the LeVeen needle Electrode as it is inserted through another incision. Finally, RFA can be performed through an open abdominal incision during surgery. During each of these procedures, your doctor will use ultrasound or perform CT scanning when inserting the needle electrode. This is to ensure that the electrode is in proper position in the tumor. Your doctor will discuss the best approach for your particular case.

How long does the procedure take?
The duration of the procedure is dependent upon many factors, including the number of tumors to be treated, their location, and the approach that is used - percutaneous, laparoscopic or surgical. Typically, a percutaneous procedure takes 1 to 1 1/2 hours.

Will I be asleep for the procedure?
The type of anesthesia or sedation that you will receive will be determined by the approach that is to be used. For example, if your procedure is to be done percutaneously, you may be awake. However, an intravenous catheter will be inserted into your vein and you will be given medication to relax you and reduce any pain. If RFA is to be done during surgery, you will be given general anesthesia. Your doctor will discuss this with you and answer any questions you may have.

How long will I have to stay in the hospital?
This will depend on how the procedure is performed. Your hospitalization could be as short as an overnight stay. Again, be sure to discuss this with your physician.

What do I do after the procedure?
Your doctor will give you specific instructions when you are discharged from the hospital. You will also be scheduled for follow-up visits so your doctor can monitor your progress with blood tests and imaging techniques such as x-rays, CT scans or MRI.

We hope you find this information valuable. In all cases, be sure to ask any questions that you may have when you see your doctor or nurse.