

*If you have  
any questions  
or concerns,  
please ask  
your physician  
or nurse.*

## Thermal Ablation of Solid Tumors

Thermal ablation uses heat or cold to kill cancer cells. Types of thermal ablation treatments include:

- Radiofrequency ablation (RFA)
- Microwave therapy
- Cryoablation

Thermal ablation may be a treatment for cancer in the lungs, liver, kidney and some other places in your body. It may be used in these instances:

- Instead of surgery or when surgery is not an option
- To kill tumor cells as part of a combination treatment with chemotherapy
- To help ease cancer pain and discomfort
- When tumors have not responded to chemotherapy
- When tumors come back after cancer treatment
- When cancer spreads to other parts of the body (metastasis)

### Benefits and risks

Thermal ablation treatment has the following benefits:

- Does not affect healthy tissue
- Allows the physician to treat more than 1 tumor at the same time, depending on the location of the tumors
- May be repeated later, as needed
- Can be used with other cancer treatments

As with any procedure, there are risks. They can include bleeding and infection. Your physician will discuss all risks and benefits of this procedure with you.

### Procedure

Thermal ablation is done in the Interventional Radiology (IR) Department. It takes about 2 hours.

The physician will insert a needle through the skin and into the tumor. They will use ultrasound and/or computed tomography (CT) to guide the needle. Once the needle is in place, the physician will use radiofrequency (RF) or microwave energy or cryoablation to destroy the tumor.

Most patients return to their normal activities within a few days.

## Preparing at home

### ***7 days before your procedure***

- Do not take any of the following medications:
  - Aspirin or products containing aspirin.
  - Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Motrin<sup>®</sup>, Advil<sup>®</sup>) and naproxen (Aleve<sup>®</sup>).
  - Blood thinners such as clopidogrel (Plavix<sup>®</sup>) and warfarin (Coumadin<sup>®</sup>).
  - Multivitamins, vitamin E, vitamin D, fish oil and vitamin C.
- Take other medications as directed by your physician.
- Arrange for a responsible adult to help you get home safely after your procedure.

### ***Day of your procedure***

- Do not have anything to eat or drink after midnight before your procedure. This includes gum, cough drops and candy.
- Take medications as directed with sips of water.

### ***What to bring to the hospital***

Please bring:

- Photo ID
- Medical insurance information and card
- Medicare card (for Medicare patients)
- List of allergies and current medications (including the last time you took them)

Please leave all valuables (jewelry, credit cards, money) at home. This includes body piercing jewelry and tongue studs. You may not wear any jewelry.

## Before the procedure

### ***Arrival***

Plan to arrive 1 1/2 hours before your thermal ablation procedure. Parking is available for patients and visitors in the garage at 222 East Huron Street, across from Feinberg and Galter pavilions. For a discounted rate, bring your parking ticket with you. You can have your ticket validated at the Customer Services Desks on the 1st and 2nd floor of Feinberg and Galter pavilions.

Come to the 4th floor of Feinberg pavilion, 251 East Huron Street. After you check in with the receptionist, you and 1 member of your family will go to the prep and recovery area.

Here, staff will review your health history, medications and allergies. You will have a short physical exam. The IR physician will also talk with you about ways to keep you comfortable during the procedure, including:

- Moderate sedation. They will give you IV (into the vein) medication that will make you relaxed. Often, patients are sleepy, but are able to talk.

- General anesthesia. This often begins with IV medication and includes breathing anesthetic gases mixed with oxygen through a face mask. You are not aware of the procedure or your surroundings. The care team may put a breathing tube into your windpipe to help you breathe.

If you are receiving general anesthesia, you will also meet the anesthesiologist at this time. Before the procedure, be sure to tell the anesthesiologist if you have any crowns, bridges or loose teeth so that they can take extra care.

After reviewing the procedure and asking any questions you may have, the physician will ask you to sign a written consent.

Once you change into a hospital gown, the care team will take your blood pressure, heart rate and temperature. They will place an IV in your arm or hand.

### **During the procedure**

Once in the procedure room, the nurse will help you lie on the exam table. A nurse, radiology technologist (tech) and a physician will all be in the room with you during the procedure. The care team will connect you to heart and blood pressure monitors. They will clean the area around the site with a special soap that may feel cold. They will cover the clean site with sterile sheets. Then they will give you IV medication to relax you or general anesthesia.

The care team will use ultrasound or CT to find the tumor that needs to be treated. Using these images, the physician will insert a needle through your skin to the tumor. Then they will apply the radiofrequency, microwave or cryoablation energy for about 5 to 30 minutes.

After the treatment, they will get more images to check the tumor area.

### **After the procedure**

Patients who had moderate sedation will return to the IR prep and recovery area. If you had general anesthesia you will go to the Post-Anesthesia Recovery Unit (PACU) on the 5th floor.

The nurse will monitor your heart rate, blood pressure and the ablation site. Let the nurse know if you are having any pain or discomfort.

After 1 1/2 to 2 hours:

- Patients who had moderate sedation may go home.
- Patients who had general anesthesia will return to the IR Department before going home.

Before you are discharged, the nurse will review guidelines about your follow-up care. This may include prescriptions for antibiotics and pain medication if needed.

All patients must have a responsible adult help them get home safely.

## At home

### *Diet*

You may go back to eating your regular diet after discharge.

### *Activity*

On the day you leave the hospital, limit your activities.

- Do not do physical exercise or heavy lifting (more than 10 pounds) for the next 3 days.
- Do not drive for 24 hours after the procedure.
- You may go back to doing all your other daily activities 24 hours after the test.

### *Symptoms*

Some patients may have flu-like symptoms (fever, chills) that appear 3 to 5 days after the thermal ablation procedure. Most often these signs last about 5 to 10 days. You can take acetaminophen (Tylenol®) for these symptoms as directed. **Do not** take any other products that contain acetaminophen while taking this medication. Too much acetaminophen may damage your liver. **Do not** take more than 4,000 milligrams (mg) of acetaminophen per day. Many remedies contain acetaminophen. Be sure to read labels carefully.

Please call your Interventional Oncology nurse if:

- Acetaminophen does not relieve the symptoms.
- You have any concerns or questions.

Call the IR Department right away at 312.926.5200 if you notice any of the following:

- Swelling or bleeding at the puncture site
- A temperature more than 101 degrees F
- Increasing redness, tenderness or discharge at the puncture site

## Follow-up care

About 4 to 6 weeks after the thermal ablation procedure, you will have the following:

- An imaging test, such as CT or magnetic resonance imaging (MRI), to see if the treatment has been effective
- Blood tests
- Interventional Oncology Clinic visit to review your test results