

Interventional Radiology: Radiofrequency Ablation to Treat Solid Tumors *What to expect*

This handout explains radiofrequency ablation and what to expect when you have this treatment for solid tumors.

What is radiofrequency ablation?

Radiofrequency ablation (RFA) is a medical treatment that uses heat to destroy (ablate) abnormal cells, such as a tumor. The heat is created by a high-frequency electric current.

Why do I need RFA?

Your doctors have found a tumor (or tumors) in your body. There are many treatments for tumors, but certain ones work best for certain people. Our team of experts believes that RFA is the best treatment option for you at this time.

RFA sometimes can destroy the tumor. But, after RFA, your doctor may also advise other treatments such as *chemotherapy*, *chemoembolization*, or surgery.

How does RFA work?

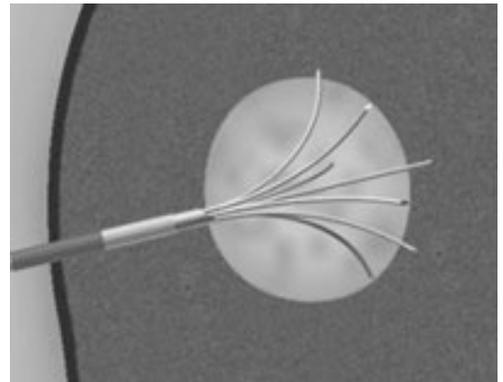
In RFA, a special probe is inserted through your skin into the tumor. The probe is guided into the tumor using images from *computed tomography (CT) scans* or *ultrasound*.

The probe has wires that go into and near the tumor. An electric current is passed through the probe, which heats and destroys the cancer cells.

Only the tumor itself and a small border of normal tissue around it will be destroyed. A scar will form where the tumor was. This scar will shrink over time.

How is RFA done?

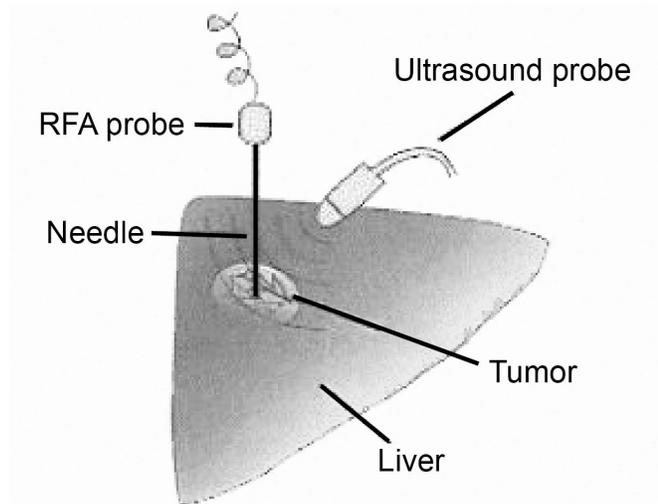
RFA is done by an *interventional radiologist*, a doctor who specializes in this type of procedure. Because you must lie very still during RFA, we



This drawing shows the RFA heat probe with wires going into a tumor.

will give you *general anesthesia* (medicine to make you sleep). You will have a breathing tube to help you breathe. A member of the anesthesia care team will monitor and care for you.

- The procedure is done in an interventional radiology suite or in a CT scanner. It takes about 1 to 3 hours, depending on the size and number of tumors being treated.
- Once you are asleep, a radiology technologist will clean your skin around the area of your procedure with a special soap. The technologist may need to shave some hair in the area where the doctor will be working.



This drawing shows the needle of an RFA probe going into a liver tumor. The ultrasound probe sends and receives sound waves that create images on a computer.

- Your doctor will insert the needle of the RFA probe into your tumor. The probe may need to be inserted more than once into the same tumor. If you have many tumors, several of them may be treated.
- The probe is removed after the tumor is destroyed. The only sign of the treatment will be small ¼-inch nicks in your skin where the probes were placed.

Are there any side effects?

All medical procedures such as this involve some risk. Most patients do very well after this procedure, without any major problems.

- You may have some pain and bruising around the puncture site. This may last for several days.
- The most common serious problem after RFA is bleeding into the belly from where the probe was inserted.

- Other risks include infection and stomach ulcers.
- Very rarely, the bowel or other organ may be injured. This can be very serious. Your doctor will take great care to avoid this kind of injury.

Your doctor will talk with you about these risks before the procedure. Please ask any questions you have. Make sure that all of your concerns are addressed.

Before Your Procedure

Pre-anesthesia Visit

You will meet with an anesthesiologist to talk about your medicines for the procedure. This visit will be either in the hospital or in a clinic. We will set up this visit for you.

Arrival Time

If you are an *outpatient* (not already staying in the hospital), a nurse will call you the afternoon before your procedure. If your procedure is on a Monday, the nurse will call you the Friday before. The nurse will:

- Tell you when to arrive at the hospital
- Remind you what to do on the morning of your procedure
- Answer any questions you have

Interpreter Services

If you do not understand English well enough to understand these instructions or the details of the procedure, tell us **right away**. We will arrange for a hospital interpreter to help you. This service is free. **A family member or friend may not interpret for you.**

Blood Test

You most likely will need a blood test done within the 14 days before your procedure. Sometimes, we can do this when you arrive for your procedure. We will tell you if we need to draw blood before that day.

Blood-thinning Medicines

If you take a blood thinner such as Lovenox (enoxaparin), Coumadin (warfarin), or Plavix (clopidogrel), you may need to stop taking it for 1 to 10 days before the procedure. The length of time depends on which medicine you are taking. If you have not been told what to do, talk with your provider or the clinic that prescribes the medicine. Tell them you are having an RFA procedure and ask when to stop taking this medicine.

IMPORTANT: If you have ever had a heart stent, a prosthetic heart valve, or a pulmonary embolism, or if you have atrial fibrillation with a history of a stroke, you **must** contact the provider who prescribes your blood-thinning medicine. Tell them that you are having a medical procedure and ask what to do about your dose before your procedure.

Diabetes Medicines

If you have diabetes and take insulin or metformin (Glucophage), we will give you instructions about holding or adjusting your dose for the day of your procedure.

Day Before Your Procedure

- Drink lots of fluids. You may eat as usual.
- If you are an *outpatient* (not staying in the hospital), plan ahead:
 - Expect to spend most of the day in the hospital.
 - Ask a responsible adult to drive you home after your procedure. **You may NOT drive yourself home or take a bus, taxi, or shuttle by yourself.** If you need to take a bus, taxi, or shuttle, the responsible adult **must** ride with you.
 - Ask a responsible adult to stay with you overnight after the procedure.

IMPORTANT: If you do not have a responsible adult to drive you home or ride with you on a bus, taxi, or shuttle, we will need to reschedule your procedure.

Procedure Day

- Take your usual medicines on the day of the procedure, unless the doctor or a nurse tells you to hold them. (Some patients may need to stop taking their blood-thinning medicines.)
- Do **not** take vitamins or other supplements. They can upset an empty stomach.
- Starting **6 hours** before your procedure, **stop eating solid foods.** You may only have *clear liquids* (liquid you can see through), such as water, broth, cranberry juice, or weak tea.
- Starting **2 hours** before your procedure, take **nothing** at all by mouth.
- If you must take medicines, take them with **only** a sip of water.
- Bring with you a list of all the medicines you take.

At the Hospital

- You may have been told to go to Outpatient Lab for a blood draw. Do this before you check in. The lab is on the 3rd floor of the hospital, next to Outpatient Pharmacy, near the Cascade elevators.
- Unless you are told otherwise, check in at Admitting on the 2nd floor, next to Radiology. Take the Pacific elevator to the 2nd floor.
- After checking in, go to the Radiology Reception Desk.
- If there is a delay in starting your procedure, it is usually because we need to treat other people with unexpected and urgent problems. Thank you for your patience if this occurs.
- When we are ready to start your procedure, a staff member will:
 - Take you to a pre-procedure area
 - Give you a hospital gown to put on
 - Give you a bag for your belongings
- While you are in the pre-procedure area:
 - Your family or a friend can be with you.
 - A nurse will ask you some health questions, take your vital signs (such as heart rate), place an *intravenous* (IV) tube in your arm, and go over what to expect.
 - A radiologist or physician assistant will talk with you about the risk and benefits of the procedure. They will ask you to sign a consent form, if you have not already signed one. You will be able to ask any questions you have.
 - The anesthesia care provider will meet you and also go over your health history.

Your Procedure

- The anesthesia care provider will take you to the Radiology suite. They will be with you for the entire procedure, and monitor your vital signs.
- You will lie flat on your back on an exam table.
- X-rays and ultrasound will be used during your procedure.
- We will use these devices to help monitor you during your procedure:
 - Wires on your chest to monitor your heart
 - A cuff around your arm will let us check your blood pressure
- Your anesthesia care provider will give you medicine to make you sleep.

What can I expect after the procedure?

- You will be watched for a short time in the recovery room.
- If you are:
 - **An outpatient:** You will go to a short-stay unit in the hospital to complete your recovery.
 - **Staying in the hospital overnight:** You will be moved to an inpatient unit. You should be able to go home in the morning by 11 a.m.
- Your family member or friend can visit you when you have settled in to the short-stay unit or the inpatient unit.
- You will need to rest on a stretcher or bed for 2 to 4 hours.
- You will be able to eat and drink when you are awake and alert, and not feeling nauseous.
- We will make sure you can move safely before you get up to walk. A nurse or patient care technician (PCT) will help you get out of bed. Most times, we place a gait belt around your waist for extra safety.
- You will be given prescriptions for pain, nausea, and constipation to take at home.

If You Are Going Home the Same Day

You will be able to go home when:

- You are fully awake
- You can eat, drink, and use the restroom
- Your nausea and pain are under control
- Your vital signs are stable
- You are able to walk as usual
- There are no signs of problems from the procedure
- You have a responsible driver to take you home
- You have a responsible adult who will stay with you overnight

Safety and Self-care at Home

The sedation medicine will stay in your body for several hours. It could affect your judgment. You may also be lightheaded or feel dizzy.

For 24 Hours

- Do **not** drive a car.
- Do **not** use machines or power tools.

- Do **not** drink alcohol.
- Do **not** take medicines such as tranquilizers or sleeping pills, unless your doctor prescribed them.
- Do **not** make important decisions or sign legal documents.
- Do **not** be responsible for children, pets, or an adult who needs care.
- Do only light activities and get plenty of rest.
- Have a responsible adult stay with you overnight.

To Help Speed Your Recovery

- Eat as usual.
- Drink lots of fluids.
- Resume your regular medicines as ordered by your provider, unless you have been told otherwise.
- Keep your puncture site covered with the dressing. Make sure it stays clean and dry.

For 48 to 72 Hours

- Do **not** lift anything that weighs more than 5 to 10 pounds (a gallon of milk weighs almost 9 pounds).
- Do only moderate activities. This will allow your puncture site to heal.
- Avoid heavy work and any activity that increases your heart or breathing rate.

Dressing Care

- After 24 hours, remove the dressing and check the puncture site. See “When to Call” on page 8 for signs to watch for.
- You may shower after 24 hours. Do **not** scrub the puncture site. Allow warm, soapy water to gently flow over the area. After showering, gently pat the site dry with a clean towel.
- Do **not** apply lotions, ointments, or powders to the site.
- You may apply a new Band-Aid. Change the Band-Aid every day for the next few days and check the site.
- Do **not** take a bath, sit in a hot tub, go swimming, or allow the puncture site to be covered with water until it is fully healed.

What to Expect

- You may have pain in your belly or side. If you have been given a prescription for pain medicine, take it as directed.
- If you are taking pain medicine, you may need a laxative or stool softener.
- You may have nausea. If you have been given a prescription for nausea, take as directed.
- You may feel very tired (fatigued).

When to Call

Call one of the numbers listed below under “Who to Call” if you have:

- Bleeding from the puncture site that fills your bandage
- Swelling or a lot of bruising around the puncture site
- Signs of infection at the puncture site: redness, warmth, tenderness, and discharge that smells bad
- Fever higher than 101°F (38.3°C)
- Chills
- A new rash that does not go away
- A lot of belly pain that does not go away even when you take your pain medicines
- Nausea that is not eased when you take the anti-nausea medicine as directed

Urgent Care

Call 911 and go to the nearest emergency room right away if you have any of these symptoms:

- Chest pain
- Trouble breathing
- Slurred speech
- Balance problems or trouble using your arms or legs

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

UWMC Imaging Services:
206.598.6200

UWMC - Northwest Imaging
Services: 206.668.4240

Who to Call

For any of the symptoms listed under “When to Call”:

- Weekdays from 8 a.m. to 4:30 p.m., call the Interventional Radiology Nurse Coordinator at 206.598.6209.
- After hours and on weekends or holidays, call 206.598.6190 and ask to page the Interventional Radiology Fellow on call.