Radiofrequency Ablation of Liver Tumors

Ablation is a procedure that destroys a tumor without actually removing it. *Radiofrequency* means that high-energy radio waves are used for this procedure.

In radiofrequency ablation, a needle-like probe is positioned close to the liver tumor. The probe uses radio waves to produce heat that kills the cancer cells. This procedure is usually used:

- For smaller tumors (less than about 1 ½ inches).
- In people whose medical condition makes surgery too dangerous.
- For tumors that are in risky locations, have not shrunk with chemotherapy, or that have come back after having been removed through an operation.
- When there are multiple smaller tumors spread throughout the liver.

BEFORE THE PROCEDURE

- Several days before the procedure, you may have blood tests to make sure your blood clots normally. You may be asked to stop taking blood thinners, aspirin, and/or nonsteroidal anti-inflammatory drugs (like ibuprofen) before the procedure.
- You will usually be asked to stop eating and drinking at least six hours before the procedure.
- You will need to make plans for someone to drive you home after the procedure.

LET YOUR CAREGIVER KNOW ABOUT

- All allergies.
- All medications that you are taking, including over-the-counter and prescription drugs, dietary supplements, vitamins, or herbal preparations.
- Any previous complications from this or other procedures.
- Smoking history.
- Possibility of pregnancy.
- History of bleeding problems.
- Any other health problems.

PROCEDURE

- You will usually be asked to change into a hospital gown.
- You will lie on an exam table, and you will be connected to monitors to keep track of your heart rate, blood pressure, and breathing throughout the procedure.
- You will have an intravenous line (IV) placed. You may be given a medicine that will allow you to be unconscious throughout the procedure (general anesthesia), or a sedative to relax you. You may also be given a medicine to numb the area (local anesthetic).
- Radiofrequency ablation can be done:
  - Through a regular surgical incision (*surgical radiofrequency ablation*).
  - Through a tiny surgical incision, using a scope (*laparoscopic radiofrequency ablation*).
  - By using needle-sized electrodes that are passed through the skin directly into the area of the liver being treated (*percutaneous radiofrequency ablation*).
- Ultrasound or CT scans are used to make sure the tip of the probe is in the right location. Once the probe has been situation next to the tumor, radio waves will produce heat that kills the tumor cells. Depending on the size of the tumor, the probe may need to be repositioned several times.
- Once the tumor has been destroyed, the probe is removed, and a bandage will be applied.
- The entire procedure usually takes about 1-3 hours.

RISKS AND COMPLICATIONS

Risks of the procedure include:

- Infection.
- Bleeding.
- Pain.
- Flu-like symptoms, including fever and achiness (*post-ablation syndrome*). This usually starts about 3-5 days after the procedure and may last for about 5 days.
- Any procedure where the skin is penetrated carries a risk of infection. The chance of infection requiring antibiotic treatment appears to be less than 1 in 1,000.

AFTER THE PROCEDURE:

- If you have had sedation or a general anesthetic, you will be sleepy.
- You may have some pain or nausea. This can usually be controlled with medicines that you take by mouth.
- You will stay in the recovery room until you are awake and able to drink fluids.
- You can go back to your usual level of activity within several days.

HOME CARE INSTRUCTIONS

- Take all medications exactly as directed.
- Follow any prescribed diet.
- Follow instructions regarding both rest and physical activity.

SEEK IMMEDIATE MEDICAL CARE IF YOU HAVE:

- Severe or lasting abdominal pain or pain in your shoulder or back.
- Inability to pass gas.
- Inability to have a bowel movement within 2 days.
- An unexplained oral temperature above 101° F (38.3° C) develops.
- A skin rash.
- Difficulty swallowing.
- Difficulty breathing.
- Severe weakness or dizziness.

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