

What is radiofrequency ablation?

Cancer can be treated by various therapies. These include, surgery, radiotherapy and chemotherapy. Radiofrequency ablation (RFA) involves the use of heat to cause destruction of cancer cells. It is another form of therapy used to treat cancer. Your medical team will discuss and propose treatment options based on your individual situation.

In RFA, small needles are used and inserted into the tumour. The needles are heated and cause damage and eventual destruction of the cancer cells.

The needles used are small, 1-2mm in diameter. No large incision is required for this procedure; it is often referred to as a pin hole. Medical imaging such as a CT or ultrasound scan or a combination of both is used to guide the insertion of the needle.

Once the needle is in the correct position, radiofrequency waves are passed through the needle, causing the molecules around the needle tip to vibrate. This imparts heat and friction to the area and kills the diseased tissue. The effect is localized but very frequently and depending on the size of the tumour, the needle is moved to a number of different positions to ensure good coverage of the tumour and its surrounding area. The dead tissue eventually shrinks away.

What are the disadvantages of RFA?

RFA is limited to small tumours, with larger tumours more likely to require surgery. Also, as with any form of treating cancer, there is a risk of recurrence at the site of the procedure.

RFA requires the insertion of needles through the skin, and then into the tumour. Sometimes, tumours cannot be easily reached, structures such as the stomach or bowel may be in the way. In these cases, your physician will discuss options with you.

What to expect during your procedure

You will receive some medications before the procedure to help you feel relaxed and comfortable. Medications will be administered as you need them by a registered nurse in the procedure. You will be sedated but awake, this is called conscious sedation.

Usually, these procedures are carried out in the CT scan area at Niagara Health. You will be positioned on the X-Ray table to allow the Interventional Radiologist to have the most effective access to your tumour. This may be on your side, stomach or back.

During the procedure, the Interventional Radiologist will scan you regularly, allowing him to plan and confirm best access to the tumour. Once this is confirmed, your skin will be cleansed with antiseptic solution and you will receive a local anaesthetic (freezing).

The Interventional Radiologist will then use radiofrequency waves via the inserted needles to heat and manipulate the needles, until the desired destruction of your tumour occurs (Ablation). Several areas may be targeted and the needles may be manipulated several times, depending on your individual situation.

A completion scan is performed at the end to immediately assess the results. The procedure can take up to 2 hours to complete, depending on each situation. All cases are different. You are then transferred back to the day stay/recovery area where your family/significant other(s) are able to see you.

Before coming to Niagara Health for your RFA

You will be asked to bring your medications with you, in their original container if possible. A detailed list including dose, how often you take them, date and time last taken is also acceptable. This includes any over the counter or herbal medications you take on a regular basis.

If you are coming as an outpatient, you will need to have a responsible person drive you home. If possible, arrange to have someone stay with you overnight.

Do not eat anything from midnight the night before your procedure. You may have clear fluids 2 hours before hand. This includes ONLY water, clear tea or coffee, apple juice.

Take your regularly scheduled medications, APART from any blood thinners or diabetic medications. These medications will be discussed with your physician beforehand and special directions will be given.

Day of your procedure

You will be asked to arrive at the hospital 1 ½ hours before your scheduled procedure time.

You will go to Central Patient Registration in the main lobby. The registration clerk will ask you for your health card and ask you several questions.

From there, you will be directed to report to Surgical Services which is located on the second floor. From the elevators, you will follow the hallways straight ahead of you with the blue line on the floor. Surgical Services a door on your right hand side. There are signs above the door to guide you. At any time, don't hesitate to ask any staff member if you need assistance.

In Surgical Services, give your name to the nurse at the desk, and a procedural nurse will call you.

This area is called Day Stay. Before your test, the nurse will assess you, ask you several questions, start an intravenous and answer any questions you may have. You can bring one family member into Day Stay with you. From this area, you will be taken to the procedure room.

What happens after the procedure?

Some discomfort following the procedure is normal. This is usually controlled with Tylenol.

It is not unusual to feel feverish for the first day or two following the procedure, this is the body's response to the treatment you received and is a normal phenomenon related to the procedure.

To keep you safe from infection, the Interventional Radiologist will give you a dose of antibiotics during the procedure. If however, you develop a fever after a week to 10 days, seek your physician's opinion.

People may also feel generally tired or under the weather for a few days.

It is advisable to take it easy and rest for about one week following the procedure, avoiding strenuous exercise.

During the procedure, you received sedation, therefore you are also advised not to drive or make any large decisions for up to 48 hours. Also avoid alcohol during this time.

The areas where the physician inserted the needles are small, and covered with a band aid which should stay dry for 48 hours. After this time the band aid can be removed. If you notice any continued bleeding, discharge or swelling at these sites, seek medical advice.

Further Information

Please contact your referring physician or Niagara Health Interventional Radiologist 905-378-4647