

# Radiofrequency ablation (RFA) of thyroid nodules

This leaflet is about the use of radiofrequency ablation (RFA) to treat thyroid nodules and is intended to supplement the information given to you by your ear, nose and throat (ENT) specialist. It includes details of what is involved in the procedure, the risks and benefits. You can discuss any queries that may arise with your consultant.

## What are thyroid nodules?

A thyroid nodule is a lump within the thyroid gland. Most thyroid nodules are benign and do not require treatment. However, some benign nodules can grow to a size where they cause symptoms, such as neck discomfort, pressure, difficulty swallowing, and sometimes cosmetic concerns.

## What are the options of treatment?

Thyroid nodules which are thought to be benign can be treated conservatively (no intervention). If they cause symptoms which affect a person's quality of life, the traditional treatment was surgical intervention to remove all (total) or half (hemi) of the thyroid gland (thyroidectomy). This requires an operation under general anaesthetic, an incision in the front of the neck, and usually an overnight stay in hospital followed by recovery period. Radiofrequency ablation is an alternative treatment which is carried out under local anaesthetic in an outpatient setting.

## What is radiofrequency ablation (RFA)?

RFA uses radiofrequency energy (similar to an electric current) to generate heat which kills cells in a targeted manner. RFA has been used for several decades in a variety of different medical contexts, including the treatment of varicose veins, irregular heartbeats, and chronic nerve pain.

## What are the benefits of using RFA for thyroid nodules?

- A general anaesthetic is not required
- The procedure does not create a surgical scar
- Normal thyroid tissue is not damaged, therefore replacement thyroid hormone (thyroxine) therapy is not required
- You do not need to stay in hospital overnight
- Recovery is much quicker than with open surgery
- The risks of the procedure are lower than with open surgery

## What are the risks of this procedure?

All medical procedures carry some risk. The risks of RFA of thyroid nodules have been published in the medical literature and are lower than in open surgical procedures.

### Immediate or early complications include:

- Pain or bleeding at needle insertion site
- Bleeding under the skin (haematoma)
- Infection, which usually presents as hot swelling

### Late or delayed complications include:

- Temporary or permanent voice change due to bruising/injury of the recurrent laryngeal nerve – (less than 1 in 100)
- Damage to the windpipe (trachea) or food pipe (oesophagus) – (less than 1 in 1000)
- New and permanent hypothyroidism (less than 1 in 1000), which will cause you to need thyroxine tablets.

It should also be emphasised that, unlike in open surgery, the nodule is not removed and therefore larger nodules can sometimes require repeat treatments with RFA. Your surgeon or radiologist may discuss this with you.

## What will happen on the day of treatment?

- You will be admitted to the Lister Treatment Centre. Your details and allergies will be checked several times throughout your stay
- You will change into a hospital gown
- The procedure will be performed by an ENT or radiology consultant
- You will lie down for the RFA
- An ultrasound scan is performed to identify the target nodule
- Your skin will be cleansed with antiseptic
- A local anaesthetic injection will be administered to a small area of skin in the front of the neck to create a numb area
- The RFA electrode is then passed into the nodule, under ultrasound guidance and via the numb patch of skin, and the RFA current is applied
- The total time taken for the procedure varies but it is usually less than 1 hour
- Painkillers can be given during the procedure, and you will be constantly monitored to ensure you are comfortable

## What happens after the procedure?

After the procedure you will move from the treatment area to a recovery area. There will be nursing staff taking care of you and the treating surgeon or radiologist will be nearby. You may be offered some pain relief or an ice pack. We expect most patients to stay for about an hour before going home, but this can vary.

Following discharge from the hospital, we will send you an appointment to come for a review. We will typically re-scan the thyroid at around 3 months, but we may contact you beforehand to arrange an earlier review, on a case-by-case basis.

## What is the success rate of treatment?

Multicentre studies with large numbers of patients (greater than 1000) have demonstrated a

significant and sustained decrease (70-90%) in the volume of the treated nodules in the majority of patients, with an associated improvement in thyroid related symptoms and quality of life.

## Further information

National Institute for Health and Clinical Excellence (NICE):

[www.nice.org.uk/guidance/ipg562](http://www.nice.org.uk/guidance/ipg562) 'Ultrasound guided percutaneous radiofrequency ablation for benign thyroid nodules.'

**Important** - If you have any concerns following your procedure, and you are unable to contact a member of the team, please present to the Accident and Emergency Department.

## Useful contact details

### East and North Hertfordshire NHS Trust:

- Website [www.enherts-tr.nhs.uk](http://www.enherts-tr.nhs.uk)
- Telephone 01438 314333

### ENT Specialist Nurse

- Marites Fernandez - Telephone 07876 390290

### ENT Secretary

- 01438 284447

## Leaflet information

**You can request this information in a different format or another language; please speak to your doctor or nurse.**

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