

Ultrasound-guided percutaneous radiofrequency ablation for benign thyroid nodules

Information for the public

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What has NICE said?

Ultrasound-guided percutaneous radiofrequency ablation for benign thyroid nodules is safe enough and works well enough for use in the NHS.

Before this procedure is used, the thyroid nodule must be tested to make sure it is benign (not cancerous). A thin needle is used to take a sample of tissue from the nodule, to check for cancer cells. Ultrasound-guided percutaneous radiofrequency ablation should not be done if the nodule is cancerous.

What does this mean for me?

Your health professional should fully explain what is involved in having this procedure, and

discuss the possible benefits and risks with you. You should also be told how to find more information about the procedure. All of this should happen before you decide whether you want to have this procedure or not.

The condition

The thyroid gland is in the neck. It produces thyroid hormones, which affect the body's growth and metabolism. Thyroid nodules are lumps in the thyroid gland, which are usually non-cancerous (benign). The nodules sometimes cause symptoms of an overactive thyroid (hyperthyroidism) such as anxiety, weight loss, breathlessness, tiredness and eye problems.

Benign thyroid nodules may need treating if they are causing symptoms or cosmetic problems. Treatment includes drugs to reduce the production of thyroid hormones, or surgery.

NICE has looked at using [ultrasound-guided percutaneous radiofrequency ablation](#) as another treatment option.

[NHS Choices](#) may be a good place to find out more.

The procedure

This procedure is usually done as an outpatient procedure, under local anaesthetic. A thin probe is inserted into the nodule using imaging guidance. The probe is attached to a device that delivers pulses of radiofrequency heat energy to destroy tissue in the nodule.

The aim of ultrasound-guided percutaneous radiofrequency ablation is to be able to use smaller cuts than with 'open' surgery, so that there is less pain and scarring.

Benefits and risks

The evidence that NICE looked at for ultrasound-guided percutaneous radiofrequency ablation to treat thyroid nodules showed that the procedure was safe enough and worked well enough to be used in the NHS.

The 7 studies that NICE looked at involved about 2,500 patients.

Generally, they showed the following benefits:

- nodules were smaller
- some patients were able to reduce or stop taking drugs for overactive thyroid (hyperthyroidism)
- cosmetic appearance was better and most people had less severe symptoms after the procedure.

The studies showed that the risks included:

- bleeding during the procedure, causing bruising in some people
- a nodule rupturing, up to several weeks after the procedure, needing further treatment in hospital. One patient had part of the thyroid surgically removed
- the voice being affected after the procedure. In most patients, this usually got better over time
- damage to a nerve going to the hand in 1 patient causing numbness and decreased sensation in the fingers, which got better
- skin burns
- 1 person had a permanently underactive thyroid (hypothyroidism) after the procedure.

If you want to know more about the studies see the [guidance](#). Ask your health professional to explain anything you don't understand.

Questions to ask your health professional

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?

- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the procedure?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

About this information

NICE [interventional procedures guidance](#) advises the NHS on the safety of a procedure and how well it works.

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Accreditation

