

# Real time ultrasound elastography in the investig

<b>Submission date</b> 28/01/2015	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 28/01/2015	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 17/10/2024	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

<http://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-trial-looking-at-a-new-way-of-testing-thyroid-nodules-to-see-if-they-are-cancerous-or-not-elation>

## Contact information

### Type(s)

Scientific

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## Additional identifiers

### Integrated Research Application System (IRAS)

142485

### Protocol serial number

CPMS 17373, IRAS 142485

# Study information

## Scientific Title

The efficacy and cost effectiveness of real time ultrasound elastography in the investigation of thyroid nodules and the diagnosis of thyroid cancer

## Acronym

ElaTION

## Study objectives

The aim of this study is to compare the use of real time elastography (RTE) in conjunction with ultrasound to guide fine needle aspiration cytology FNAC (the intervention) with conventional ultrasound-only guided FNAC (current practice-comparator).

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

NREC Committee South Central- Berkshire, 10/10/2014, ref: 14/SC/1206

## Study design

Randomized controlled trial

## Primary study design

Interventional

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

Topic: Cancer, Ear, nose and throat; Subtopic: Head and Neck Cancer, Ear (all Subtopics); Disease: Endocrine, Head and Neck

## Interventions

Intervention arm- Real-time ultrasound elastography – guided FNAC. RTE is a technology that can be added at the same time as the routine ultrasound examination, and may help differentiate benign from malignant nodules based on the compression characteristics of the two.; Follow Up Length: 12 month(s)

## Intervention Type

Procedure/Surgery

## Primary outcome(s)

Primary outcome measure as of 14/02/2017:

The proportion of patients who have a non-diagnostic (Thy1) cytology result following the first FNAC.

Original primary outcome measure:

The rate of benign histology result following thyroid surgery, compared between the RTE-FNAC arm and the conventional US-FNAC arm.

## **Key secondary outcome(s))**

Secondary outcome measures as of 14/02/2017:

1. Number of FNACs required to obtain definitive diagnosis
2. Time from first FNAC to obtaining a definitive diagnosis
3. The proportion of patients with benign histology results following thyroidectomy
4. Proportion of patients who have thyroidectomy
5. Accuracy of a cytology results for first FNAC and repeated FNAC in relation to overall definitive diagnosis;
6. Accuracy of an imaging assessment on ultrasound (with or without RTE) alone diagnostic protocol in relation to overall definitive diagnosis
7. Patient reported outcome measures of depression and anxiety, pain, and quality of life: the Hospital Anxiety and Depression rating scale (HADS), Visual Analogue Pain Score (VAPS) and EQ-5D quality of life score
8. Radiologist report of whether RTE had contributed to the radiologist's decisions, how easy they found using RTE, and whether they found it helpful above using US-alone in predicting malignancy
9. Complication rate from any thyroidectomy at 30-days and 6-months post-surgery – to include haematoma and temporary hypocalcaemia rate at 30 days and vocal cord palsy and permanent hypocalcaemia at 6 months post-operative
10. Resource usage for consultant time and diagnostic testing procedures and subsequent management including consultations and surgical treatments

Original secondary outcome measures:

1. Overall number of FNAC's Required and time to obtain a definitive diagnosis in each arm
2. Non-diagnostic cytology (Thy1) rate for the first FNAC undertaken in each patient
3. Resource use for consultation time and diagnostic testing procedures and quality of life (EQ-5D)
4. Predictive value of a benign (Thy2) cytology results for first FNAC and repeated FNAC in relation to overall definitive diagnosis for RTE-FNAC and conventional US-FNAC
5. Patients reported anxiety immediately before and after US FNAC, immediately before each consultation for results of US FNA or surgery and at 6 and 12 months from initial US FNAC
6. Radiologist survey-completed by Radiologists at the end of the procedure to identify whether radiologists found US or RTE had contributed to their decision, ease of use, and their prediction of malignancy of the nodule using RTE or US features alone
7. Agreement rates for RTE between local operator and RTE or US features alone
8. Patient reported pain (by Visual analogue score) at procedure
9. Complication rate from any thyroidectomy- haematoma rate, vocal cord palsy at 6 months, permanent hypocalcaemia rate at 6 months
10. Cost-benefit analysis

## **Completion date**

30/09/2022

## **Eligibility**

### **Key inclusion criteria**

1. Patients with single or multiple thyroid nodules whether solid, cystic or mixed, undergoing investigation who have not undergone previous FNAC within the last 6 months
2. Aged 18 years or over
3. Patient able and willing to give written informed consent

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

982

**Key exclusion criteria**

1. Patients who have undergone previous thyroid FNAC in the last 6 months.
2. Patients with a bleeding diathesis that precludes FNAC
3. Patients with a needle phobia.
4. Pregnant patients
5. Patients with purely cystic nodules or with recent haemorrhage, with no solid component

**Date of first enrolment**

27/02/2015

**Date of final enrolment**

30/09/2018

**Locations****Countries of recruitment**

United Kingdom

England

**Study participating centre**

Clinical Trials Unit (University of Birmingham)

Edgbaston

Birmingham

United Kingdom

B15 2TT

**Sponsor information**

**Organisation**

University of Birmingham

**ROR**

<https://ror.org/03angcq70>

**Funder(s)****Funder type**

Government

**Funder Name**

National Institute for Health Research

**Alternative Name(s)**

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

**Results and Publications****Individual participant data (IPD) sharing plan**

Not provided at time of registration

**IPD sharing plan summary**

Not provided at time of registration

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	Evaluation of US elastography	01/08/2024	10/09/2024	Yes	No
<a href="#">Results article</a>		15/10/2024	17/10/2024	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes
<a href="#">Protocol file</a>	version 5.0	18/11/2016	09/01/2023	No	No

[Study website](#)

Study website

11/11/2025 11/11/2025 No

Yes