# An audit of percutaneous lung tumour radiofrequency ablation

**Descriptor:**

Radiofrequency ablation (RFA) is being used as a local treatment method for lung, liver and renal tumours. This is a relatively new technique. Current NICE recommendation suggests that treatments should be undertaken in the context of frequent audit.

**Background:**

RFA uses heat to locally destroy tumour tissue. The lung is a common treatment site. More regional centres are developing a service and careful audit of success and complications is required.

## The Cycle

**The standard:**

Clerical and secretarial support-to organise patient bookings and lists

Dedicated radiology nursing cover-to provide assistance during the procedure, aftercare and discharge

Dedicated radiographer cover-senior radiographers familiar with RFA and interventional CT

At least two consultant radiologists trained in RFA technique

Outpatient facilities-for preclerking and post procedural review

Anaesthetic availability-for administration of general anaesthesia when required

Access to day case beds-patients admitted under joint careComplication rates should be low and within published standards:

minor complications- small pneumothorax, mild chest pain, mild haemoptysis, mild pyrexiamajor complications - pneumothorax requring drainage, abscess, severe chest pain, severe haemoptysis, deathLocal relapse rate at 1,2 and 3 years.

**Target:**

100% compliance with all of the above staffing and logistical targets (Ref 1).

Complications: minor <27%, major <6% (Ref 2,).

Local relapse rate: <30% at three years (Ref 3).

## Assess local practice

**Indicators:**

Compliance of local service with logistical and staffing standards

Local complication and relapse rate

**Data items to be collected:**

Patient demographics; Treatment dates; Treatment details (electrode used, ablation cycles)

Immediate complications as seen on CT / clinically

Findings on follow up CT (performed at 1,3,6,9,12,15,18,21,24,27,30,33 and 36 months)

Case notes review.

**Suggested number:**

All patients undergoing lung RFA for primary or secondary pulmonary malignancy. Ideally with follow up for three years for local relapse component of audit.Typical number=30

**Suggestions for change if target not met:**

Review staffing and logistic support.

Observe for patterns in complications or local relapse rate. Are the correct lesions being treated?

**Resources:**

PACS and RIS access

Local RFA database

Case note/electronic record review

Approximately 5 hours of work to review caseload if prospective database is kept

**References:**

1. Standards for radiofrequency ablation (RFA), Second Edition RCR, 2013.
2. Li, G., Xue, M., Chen, W. and Yi, S. (2018). Efficacy and Safety of Radiofrequency Ablation for Lung Cancers: A Systematic Review and Meta-Analysis. European Journal of Radiology.
3. RAPTURE. Lancet Oncology, Vol 9, 2008
4. Bolland et al, Radiology 254 (1) Jan 2010.

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