

# Radiofrequency ablation of hepatocellular carcinoma

Interventional procedures guidance

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[nice.org.uk/guidance/ipg2](https://www.nice.org.uk/guidance/ipg2)

## Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

## 1 Recommendations

- 1.1 Current evidence of the safety and efficacy of radiofrequency ablation (RFA) for hepatocellular carcinoma appears adequate to support use of the procedure, provided that normal arrangements are in place for consent, audit and clinical governance.

1.2 It is recommended that:

- patient selection should be carried out by a multidisciplinary team that includes a hepatobiliary surgeon
- the procedure should be monitored by CT or ultrasound.

## 2 The procedure

### 2.1 *Indications*

2.1.1 Hepatocellular carcinoma is one of two common malignant tumours affecting the liver. The majority of malignant liver tumours are unsuitable for surgical excision because of their number, distribution and/or the presence of residual disease elsewhere. Therefore, a number of alternative treatments have been developed, of which RFA is one.

### 2.2 *Outline of the procedure*

2.2.1 RFA is a recently developed minimally invasive technique that destroys tissue by heating. Electrodes are inserted percutaneously into the tumour and current is applied to generate local heating and destroy tissue.

### 2.3 *Efficacy*

2.3.1 There is evidence that RFA results in tumour destruction, which may be associated with higher survival rates. For more details refer to the overview (see 'Sources of evidence considered by the Committee').

### 2.4 *Safety*

2.4.1 Complications of RFA are not common, but include hepatic abscess and injury to bile ducts. The rate of complications appears lower than that with alternative treatments. Evidence suggests a mortality rate of 1% or less. For more details refer to the overview (see 'Sources of evidence considered by the Committee').

2.4.2 The specialist advisors suggested the complication rate to be 3–5%.

## 2.5 *Other comments*

- 2.5.1 The Committee noted that there was less evidence available about the safety and efficacy of RFA in treatment of colorectal metastases. Guidance for this indication will be postponed pending the publication of a systematic review by the Australian Medical Services Advisory Committee.

## 3 Further information

### *Sources of evidence considered by the Committee*

The following source of evidence was considered by the Interventional Procedures Advisory Committee.

'Interventional procedure overview of radiofrequency ablation for the treatment of liver tumours', October 2003.

### *Information for patients*

NICE has produced information on this procedure for patients and carers ('Understanding NICE guidance'). It explains the nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

## 4 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE interventional procedure guidance process.

We have produced a summary of this guidance for patients and carers. Information about the evidence it is based on is also available.

### Changes since publication

29 November 2011: minor maintenance.

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Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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### *Endorsing organisation*

This guidance has been endorsed by [Healthcare Improvement Scotland](#).