**Adherence to the liver lesion investigation pathway, as specified in the EASL-EORTC Clinical Practice Guidelines (2018), for suspicious liver lesions**

**Descriptor:**

An audit to assess whether the investigative pathway for patients with suspicious liver lesions until definitive diagnosis is compliant with guidelines.

**Background:**

Liver cancer is associated with significant morbidity and mortality globally, accounting for 7% of all cancers and representing the third highest cause of cancer-related death (1). Hepatocellular carcinoma (HCC) constitutes over 90% of primary liver malignancies and is rising in incidence (2). Early diagnosis of HCC, achieved through prompt and appropriate investigation of suspicious liver lesions, produces significant improvements in five-year survival rates (3). The initial identification of the lesion may be on any modality, after which the pathway should be followed for accurate characterisation.

## The Cycle

**The standard:**

**After initial identification of an abnormality, in patients where the initial lesion is <1 cm:**

- Repeat ultrasound at 4 months. If stable, repeat in 4 months, If growing/changing follow >1cm pathway.

**In patients where the initial lesion is >1cm and there is evidence of cirrhosis:**

- Carry out a multiphasic contrast-enhanced CT or multiphasic contrast-enhanced MRI. If this demonstrates findings typical\*\* of hepatocellular carcinoma, no further investigation is needed and a definitive diagnosis can be made.

- If it does not show typical findings, use the other modality (multiphasic contrast-enhanced CT or multiphasic contrast-enhanced MRI). If this shows typical findings, no further investigation is needed and definitive diagnosis can be made.

- If both modalities demonstrate atypical findings, biopsy is required.

**In patients where the initial lesion is >1cm and there is no evidence of cirrhosis:**

- Carry out a multiphasic contrast-enhanced CT or multiphasic contrast-enhanced MRI. If this demonstrates findings typical of hepatocellular carcinoma, a biopsy should be carried out for definitive diagnosis.

- If it does not show typical findings, use the other modality (multiphasic contrast-enhanced CT or multiphasic contrast-enhanced MRI). If this shows typical findings, a biopsy should be carried out for definitive diagnosis.

- If both modalities demonstrate atypical findings, biopsy is required.

**Target:**

100% adherence to guidelines.

## Assess local practice

**Indicators:**

- Existence of a local protocol/pathway for investigation of suspicious liver lesions.

- Percentage of patients with initial liver lesions <1cm being followed up with US at 4 months.

- Percentage of patients with initial liver lesions >1cm being followed up with dedicated imaging.

        Percentage of cirrhotic patients being investigated according to guidelines.

        Percentage of non-cirrhotic patients being investigated according to guidelines.

**Data items to be collected:**

- List of patients with identification of a suspicious liver lesion. (this may be obtained via keyword search in the local database or prospective collection of imaging requests for further characterisation of a suspicious liver lesion)

- Size of lesion initially

- Next imaging study carried out (modality and protocol)

         Findings of this study (typical/atypical)

- Any further imaging studies carried out (modality and protocol)

         Findings of these studies

- Whether biopsy was carried out

         Results of Biopsy

**Suggested number:**

Patients over a 12 month period or 50 patients.

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

1) Identify if there is a local policy and compare to EASL–EORTC Clinical Practice Guidelines to assess for level of concordance.

2) Institute change to local policy in discussion with radiology and hepatology departments.

3) Deliver teaching to radiology and hepatology department to inform members of guidelines.

4) Produce posters/virtual documentation that demonstrate the guideline (would work effectively as a flowchart as present in the EASL-EORTC guidelines document).

**Resources:**

EASL–EORTC Clinical Practice Guidelines: Management of hepatocellular carcinoma (2018).

**References:**

1. 1) Bruix J, Sherman M, Llovet JM, Beaugrand M, Lencioni R, Burroughs AK, et al. EASL Panel of Experts on HCC. Clinical management of hepatocellular carcinoma. Conclusions of the Barcelona-2000 EASL conference. European Association for the Study of the Liver. J Hepatol 2001;35:421–430.

2) Marrero JA, Kulik LM, Sirlin CB, Zhu AX, Finn RS, Abecassis MM, et al. Diagnosis, Staging, and Management of Hepatocellular Carcinoma: 2018 Practice Guidance by the American Association for the Study of Liver Diseases. Hepatology. 2018;68(2):723–50.

3) Bruix J., Sherman M. Management of hepatocellular carcinoma: An update. Hepatology. 2011;53:1020–1022.

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