

## Management of small focal liver lesions in a cirrhotic liver : Discussion

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*Panel :*

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### Which cirrhotic patients are “at risk” and should be screened ?

Any cirrhotic patient is at risk for the development of hepatocellular carcinoma (HCC), but especially patients with viral hepatitis B and C, alcoholic liver disease, and hemochromatosis. More recently, it has become apparent that obese patients and patients with diabetes (NASH) have an increased risk for HCC. It is also clear that male patients have a 2 to 3 × higher risk for developing HCC. Older patients (in Europe > 50 years) carry a higher risk as well, but this is probably only reflection of the duration of the disease. A slight elevation of  $\alpha$ -FP remains a risk factor for HCC in the next years.

### How should we screen patients at risk ?

Hepatocellular carcinoma is a tumour suitable for screening as it fulfils most screening program criteria : there is a well defined population at risk (cirrhotics), simple diagnostic non-invasive tests are available (ultrasound and  $\alpha$ FP) although diagnostic accuracy is only moderate, the tests are accepted by the target population, screening interval is established (6 months), and finally, curative treatment exists (surgery, transplantation, percutaneous treatment with ethanol or radiofrequency ablation). There is however debate on the cost-effectiveness of a screening program (1).

Therefore, there is a place for new serum markers which have been proposed, but need prospective evaluation in clinical trials. Awaiting these new tests,  $\alpha$ FP and ultrasound at six months interval is recommended as surveillance for patients at risk.

### Which is the first choice exam to be performed when on ultrasound a small (1-2 cm) lesion is found in a cirrhotic patient ?

The audience favoured MRI (69%) above CT with lipiodol (18%), biopsy (8%), contrast-enhanced ultrasound (4%) and a wait and see policy (1%). Nobody preferred angiography as the first step to further examine small liver lesions.

In all cases, it is mandatory to investigate these small lesions with a second imaging technique, since according to the EASL 2000 guidelines at least two positive imaging techniques showing hypervascularity are required before the diagnosis of HCC can be confirmed. In Italy, contrast-enhanced ultrasound is used in specialized centres. This exam takes only 5 minutes and hypervascularity can be detected in at least 50% of lesions < 2 cm. In this way, the first imaging technique can be performed during the same patient visit which is time and cost saving. Contrast-enhanced ultrasonography has a very high sensitivity (agreement with spiral CT) for assessing the hypervascular nature of the nodule : 87.5% for lesions between 1 and 2 cm, 91.7% for lesions between 2 and 3 cm, and 97.3% for lesions of more than 3 cm. If contrast-enhanced ultrasound is not available, Doppler ultrasound is used. Sensitivity for the detection of hypervascular nodules is clearly lower than contrast-enhanced ultrasound, but it can also be performed during the same session, and there is no reason not to perform Doppler when conventional ultrasound demonstrates a small liver nodule. The second imaging technique used is contrast-enhanced CT-scan (without lipiodol). MRI is only the third technique in Italy.

In Belgium however, contrast-enhanced ultrasound is not regularly performed (2). One reason is probably the fact that until recently (September 2005), contrast is not reimbursed, even if the price of contrast is only circa 50 per patient, which is cheaper than CT or MRI. The criteria for the diagnosis of hypervascular lesions and HCC with Doppler ultrasound without contrast enhancement are not 100% established. Therefore spiral CT-scan or MRI will be first choice imaging techniques in our country. MRI has some advantages over CT-scan : T2-weighted images are characteristic for HCC (hyper-signal), the fast wash-out of contrast can be better

Discussion held at the Winter BASL meeting in Antwerp, following the talk of Prof L. Bolondi (Bologna) on small liver nodules. A summary of the most important topics from the discussion is given below.

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appreciated on MRI and less contrast is needed for MRI. Another benefit of MRI is the detection of small "satellite lesions" for which MRI is more accurate than CT-scan and ultrasound. Multislice CT-scan with optimal timing of scanning after contrast injection is clearly an advantage over classical CT-scan. It was concluded that MRI is slightly superior than spiral CT-scan for evaluation of HCC.

### **What if you find 6 lesions, with 2 lesions > 2 cm on MRI ?**

According to the Milan criteria the patient is not a candidate for liver transplantation, and transarterial chemoembolisation is advocated (3). It was the opinion

of Prof. Bolondi that, if this treatment was successful (no viable lesion for at least six months), the patient could be evaluated for liver transplantation.

### **References**

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