Screening for significant chronic liver disease by using three simple ultrasound parameters

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Mots-clés: cirrhosis [8], Fibrosis [9], Liver [10], Screening [11], Ultrasound [12]
Objectives
Chronic liver diseases remain asymptomatic for many years. Consequently, patients
are diagnosed belatedly, when cirrhosis is unmasked by lifethreatening
complications. We aimed to identify simple ultrasound parameters for the screening
of patients with unknown significant chronic liver disease.

Methods
Three hundred and twenty seven patients with chronic liver disease, liver biopsy, and
ultrasound examination were included in the derivation set. 283 consecutive patients
referred for ultrasound examination were included in the validation set; those
selected according to the ultrasound parameters identified in the derivation set were
then referred for specialized consultation including non-invasive fibrosis tests and
ultimately liver biopsy if liver fibrosis was suspected.

Results
In the derivation set, three ultrasound parameters were independent predictors of
severe fibrosis: liver surface irregularity, spleen length (>110 mm), and
demodulation of hepatic veins. The association of ≥2 of the three above parameters
provided 49.1% sensitivity and 86.9% specificity. In the validation set, at ≥2 of the
three parameters were present in 23 (8%) of the patients. Among these patients, 8
had liver fibrosis (F ≥ 1), 5 had significant fibrosis (F ≥2) and two cirrhosis.

Conclusion
The generalized search of three simple ultrasound signs in patients referred for
abdominal ultrasound examination may be an easy way to detect those with silent but
significant chronic liver disease.