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Observational Study

## **Concordance of non-invasive mechanical and serum tests for liver fibrosis evaluation in chronic hepatitis C**

Paranaguá-Vezozzo DC *et al.* Non-invasive tests for liver fibrosis evaluation

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**Scientific research process:**

### **1 What did this study explore?**

To determine the sensitivity and specificity of liver stiffness measurement and serum markers for liver fibrosis evaluation in chronic hepatitis C

### **2 How did the authors perform all experiments?**

Between 2012 and 2014, 81 consecutive HCV patients had METAVIR score from liver biopsy compared with concurrent results from liver stiffness measurement [Transient Elastography-TE (FibroScan®/ARFI technology (Virtual Touch®)) and serum markers (FIB-4/APRI).

### **3 How did the authors process all experimental data?**

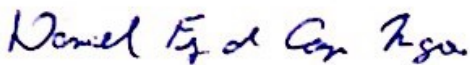
The diagnostic performance of these tests was assessed using ROC curves. The optimal cut-off levels of each test were chosen to define fibrosis stages  $F \geq 2$ ,  $F \geq 3$ , and  $F=4$ . The Kappa index set the concordance analysis

#### **4 How did the authors deal with the prestudy hypothesis?**

Our results showed that the three methods, ARFI, TE and FIB-4, independently identify advanced fibrosis. However, a limitation of this study is that it identifies and selects cut-off points, but is not prospectively validated, warranting further studies to confirm these results.

#### **5 What are the novel findings of this study?**

The combined use of FibroScan® and FIB-4 or FibroScan® and ARFI in the follow-up of HCV patients can be a surrogate for fibrosis assessment through LB, which can be held in reserve for cases with significant diagnostic doubt. This is especially important in the intermediate stages of fibrosis (F2 and F3), where each individual non-invasive method is not sufficiently accurate to make a diagnosis, and so should be performed in combination. This may be of particular importance to developing countries.



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