FibroTest Scientific Publications
Key Publications for 2016

Houot 2016
FibroTest
TE
APRI
Fib-4
Direct meta-analysis
FibroTest is superior to TE by Fibroscan, APRI and Fib-4
Systematic review with meta-analysis: direct comparisons of biomarkers for the
diagnosis of fibrosis in chronic hepatitis C and B.
Direct comparisons permitted to improve standard methods of meta-analysis
between the most used noninvasive tests FibroTest, APRI and transient
elastography (TE) by Fibroscan. 71 studies were eligible including 185 direct
comparisons in chronic hepatitis C and B.
• For significant fibrosis (F2F3F4 METAVIR 12,725 patients) FibroTest had
superior performances than TE by Fibroscan
• For identifying cirrhosis (F4 10,929 patients) FibroTest had similar
performance to TE
• FibroTest was more applicable than TE by Fibroscan (99% versus 88%)
• FibroTest was more accurate than APRI and FIB-4 for both cirrhosis and
fibrosis

Cheng 2015
FibroTest
Biopsy
HBV
New Asian validation in HBV
Validation of ten non-invasive diagnostic models for prediction of liver fibrosis in
patients with chronic hepatitis B.
New direct comparison against biopsy has been done using a cohort of 459
Asian patients:
• Only six models including FibroTest gave good prediction for every fibrosis
stages.
• FibroTest standard AUROCs were 0.74, 0.81 and 0.78 for F2, F3 and F4
diagnoses. FibroTest had a high positive predictive value (90%) for severe
fibrosis (F3F4) cutoffs.

Wang 2015
FibroTest
Biopsy
TE
HBV
Chinese validation in HBV
Diagnostic value of FibroTest for liver fibrosis in patients with chronic hepatitis B.
[Article in Chinese]
FibroTest was validated on a new Asian cohort of 142 chronic HBV carriers
against liver biopsy and indirect comparison with transient elastography (TE).
• Significant fibrosis was predicted with an AUROC of 0.90 for FibroTest versus
0.83 for TE
• Cirrhosis was predicted with an AUROC of 0.99 for FibroTest versus 0.94 for TE.
The original article being in Chinese it was not possible to make a discussion on
spectrum bias.
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**Park 2015**

*FibroTest TE Combinations HBV*

Risk assessment according to FibroTest and to FibroTest-stiffness combination

**Prognostic value of the combined use of transient elastography and FibroTest in patients with chronic hepatitis B.**


Authors investigated 127 chronic HBV carriers for the prognostic role of the combination of FibroTest with transient elastography (TE) in predicting liver-related events at 5 year follow-up.

- Combination of FibroTest – TE was predictive of liver-related events better than histological fibrosis staging. However, the additional benefit was marginal compared to FibroTest alone.
- Combination of FibroTest – TE permitted to classify patients in 3 levels of prognosis according to complications: high, intermediate and low grades.

**Haseltine 2015**

*FibroTest APRI FIB-4 HCV *

HCV SVR’s follow-up with FibroTest, better than APRI and FIB-4

**Successful treatment with telaprevir-based regimens for chronic hepatitis C results in significant improvements to serum markers of liver fibrosis.**

*Haseltine EL1, Penney MS, George S, Kieffer TL.* J Viral Hepat. 2015.

This retrospective analysis was done on 1208 patients from telaprevir clinical studies (PROVE3, ADVANCE, REALIZE) with repeated biomarkers: FibroTest, APRI, FIB-4 and Forns’ Score before and after HCV treatment (at 24 weeks). Compare to APRI and Fib-4, FibroTest improvement in SVR was less than a METAVIR stage, suggesting a more realistic approach of FibroTest, than tests based on ALT and related to necroinflammatory improvement.

**Schmid 2015**

*FibroTest APRI FIB-4 HIV-HCV*

FibroTest better than APRI and FIB-4 in HIV/HCV co-infected patients from the Swiss HIV Cohort Study (SHCS)

**Progression of liver fibrosis in HIV/HCV co-infection: a comparison between non-invasive assessment methods and liver biopsy.**


The study included 105 HIV/HCV co-infected patients, from SHCS with liver biopsy taken as gold-standard:

- For cirrhosis, FibroTest diagnostic performance was 0.84 (0.75–0.92) with 86% sensitivity and 72% specificity.
- FibroTest performances were better Hyaluronic acid both for advanced fibrosis and cirrhosis
- FibroTest negative predictive value was 90%, higher than TE by Fibroscan (85%), APRI (80%), FIB-4 (80%) and Hyluronic acid (76%).
FibroTest experience in Middle East patients

Non-invasive biomarkers FibroTest and ActiTest versus liver biopsy in chronic hepatitis C patients: the Middle East experience.


A new study has evaluated FibroTest and ActiTest against biopsy in predicting fibrosis and activity in 107 chronic hepatitis C (CHC) and in 106 blood donors taken as controls.

- Fibrotest and ActiTest have showed high diagnostic values for both fibrosis and activity.
- FibroTest and ActiTest specificity was very high in the control population: 95% and 100% respectively.

Awareness of the severity of liver disease in 1.1 Million patients

Awareness of the severity of liver disease re-examined using software-combined biomarkers of liver fibrosis and necroinflammatory activity.


Authors assess the relationships between fibrosis, activity, age and gender at a scale unreachable using biopsy (more than a Million of subjects)

- The global database of the FibroTest–ActiTest includes 1,085,657 subjects between 2002 and 2014. For the purpose of the study authors compared the US’ population with France’s, two countries with similar access to hepatitis treatments.
- There was a dramatically lower awareness of cirrhosis in the USA for women born between 1935 and 1944 in comparison with France.
- Therefore women born before 1945 with a life expectancy of >80 years should be considered for non-invasive screening of liver fibrosis.

A related poster presenting the awareness of the severity of liver disease in NAFLD compared to HCV will be displayed in Saturday April 16th poster session (#486)
Rudler 2015  
FibroTest  
AshTest  
ASH  
Alcohol

AshTest for a new definition of severe alcoholic hepatitis  
Validation of AshTest as a non-invasive alternative to transjugular liver biopsy in patients with suspected severe acute alcoholic hepatitis.  
AshTest is the non-invasive alternative to transjugular liver biopsy in patients suspected for severe ASH.  
N=123 cirrhotic patients with severe ASH were included.  
• AshTest performance was significantly higher than the AST/ALT ratio.  
• AshTest performance was confirmed in the appropriate context of use: cirrhotic patients with severe ASH with corticosteroid treatment  
• Authors proposed to improve the previous definition of ASH, based mainly on inflammation and necrosis, by including steatosis and fibrosis features. This has already been done for NAFLD, with the SAF score (Bedossa et al).  
• FibroTest had 100% positive predictive value for cirrhosis in severe ASH patients.

Gudowska 2015  
FibroMax  
Alcohol

Screening excessive drinkers with FibroMax panel  
The distribution of liver steatosis, fibrosis, steatohepatitis and inflammation activity in alcoholics according to FibroMax test.  
142 excessive alcohol drinkers with FibroMax evaluation of liver diseases were included:  
• Advanced fibrosis prevalence as per FibroTest was around 15% within 9% cirrhosis.  
• One third of excessive drinkers had significant steatosis as per SteatoTest, 5% minimal alcoholic hepatitis (ASH) as per AshTest.  
• The fact that only one in four subjects had important activity, suggested once more to use appropriate markers of fibrosis instead of ALT-based markers.

Bignulin 2015  
FibroTest  
Transplantation

FibroTest in Transplanted patients  
Usefulness of acoustic radiation force impulse and FibroTest in liver fibrosis assessment after liver transplant.  
The authors assessed whether ARFI and other non-invasive biochemical tests including FibroTest could spare liver biopsies, by discriminating graft fibrosis severity in liver transplanted (LT) patients.  
This prospective study included 51 HCV LT-patients. The diagnostic value for FibroTest was 0.85 for discriminating patients with Ishak fibrosis minimal score (0-2) vs. advanced (3-6).
FibroTest and SteatoTest (FibroMax panel) for the evaluation of coffee consumption effects

Coffee consumption and nonalcoholic fatty liver onset: a prospective study in the general population.


This cross-sectional study evaluated the association between coffee consumption and fatty liver onset in the general population. Fatty liver was diagnosed with abdominal ultrasound (US) and SteatoTest, whereas FibroTest was used to assess fibrosis degree.

- High coffee consumption was associated with a lower proportion of clinically significant fibrosis F2, as per FibroTest.
- High coffee consumption is not able to counteract steatogenesis as estimated by per SteatoTest and liver US.
- For the determination of fibrosis, the most significant factor of clinical outcomes in NAFLD, authors proposed to use the FibroTest.

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