

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.***Houot M, Ngo Y, Munteanu M, et al. Aliment Pharmacol Ther. 2016;43:16-29*

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.***Cheng J, Hou J, Ding H, et al. PLoS One. 2015;10:e0144425.*

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.***Wang C, Cheng X, Meng C, et al. Zhonghua Gan Zang Bing Za Zhi. 2015;23:738-41.**[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.

# FibroTest Scientific Publications

## Key Publications for 2016

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.**

*Park MS, Kim SU, Kim BK, et al. Liver Int. 2015;35:455-62.*

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 ELI, 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.**

*Schmid P, Bregenzler A, Huber M, et al.; Swiss HIV Cohort Study. PLoS One. 2015;10:e0138838.*

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 Hyaluronic acid (76%).

# FibroTest Scientific Publications

## Key Publications for 2016

Yakoob 2015  
FibroTest  
HCV

### FibroTest experience in Middle East patients

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

*Yakoob R, Bozom IA, Thandassery RB, et al. Ann Gastroenterol. 2015;28:265-270.*

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.

Poynard 2015  
FibroTest  
ActiTest  
Awareness

### 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.**

*Poynard T, Deckmyn O, Munteanu M et al from FIBROFRANCE Group. BMJ Open. 2015;5:e010017.*

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 displayed in Saturday April 16th poster session (# 486)*

Related POSTER  
#486

Saturday April 16th

# FibroTest Scientific Publications

## Key Publications for 2016

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.**

*Rudler M, Mouri S, Charlotte F, et al. PLoS One. 2015;10:e0134302.*

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.**

*Gudowska M, Wojtowicz E, Cylwik B, et al. Adv Clin Exp Med. 2015;24:823-7.*

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.**

*Bignulin S, Falletti E, Cmet S, et al. Ann Hepatol. 2016;15:200-6.*

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 Scientific Publications

## Key Publications for 2016

Zelber-Sagi 2015  
FibroTest  
SteatoTest  
Coffee  
NAFLD

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.**

Zelber-Sagi S, Salomone F, Webb M. et al. *Transl Res.* 2015;165:428-36.

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.

Browse all our publications on :  
<http://library.biopred.ictive.com/>

The screenshot displays the BioPredictive Library website interface. At the top, there are navigation tabs: "by Test", "by Comparison", "by Disease", and "by Liver Injuries". A search bar is located on the right. The main header reads "BioPredictive Publications" with the Bio Predictive logo. Below the header, a brief description states: "FibroTest-ActiTest is the non-invasive liver test benchmark. Launched more than 10 years ago FibroTest success relies on the quality of its scientific background. Consecutively, SteatoTest, NashTest and AshTest were finalized with the same demanding quality. BioPredictive offers with this site the exhaustivity of its extensive scientific work - 244 studies have been published by 1009 authors in 76 journals - all publications are tagged for an easy browsing." The main content area shows a list of publications. The first entry is "#249" for a 2013 Nature reviews article on Gastroenterology & hepatology by Castéra, Laurent, titled "Noninvasive evaluation of NAFLD." It lists authors Castéra L, Vilgrain V, Angulo P and includes tags for FibroTest, ActiTest, SteatoTest, NashTest, Independent Team, vs. Elastography, vs. Biomarkers, Metabolic Diseases, Fibrosis, and Steatosis. The second entry is "#247" for a 2013 HIV medicine article by Castéra, Laurent, titled "Comparison of transient elastography (FibroScan), FibroTest, APRI and two algorithms combining these non-invasive tests for liver fibrosis staging in HIV/HCV coinfecting patients: ANRS CO13 HEPAVIH and FIBROSTIC collaboration." It lists authors Castéra L, Winrock M, Pambrun E, Paradis V, Perez P, Loko MA, and includes tags for FibroTest, ActiTest, SteatoTest, NashTest, and AshTest. On the right side, there is a sidebar with "214 publications" and filters for "by Journal", "by Authors", "by Kind" (with "Article" selected), and "by Test" (with "FibroTest" selected).