FibroMeter



Noninvasive blood testing for the evaluation and management of liver fibrosis







* Yearly estimates are based on Medicare and private payer claims data (Definitive Healthcare).

~\$300,000,000 >\$2,000

Healthcare costs in the United States

Average charge per liver biopsy*

FibroMeter may help reduce costly and invasive liver biopsies.

FibroMeter

FibroMeter Virus is specifically designed for patients with chronic viral hepatitis (B, C) with or without HIV coinfection.

Features and Benefits

- · High diagnostic accuracy confirmed by a rules-based expert system to detect discordant results
- No interference in specimens collected from patients with Gilbert disease or hemolysis (e.g., induced by ribavirin)
- Enhanced graphical reporting available

Biomarkers Measured

• Platelets, alpha-2-macroglobulin, ALT, AST, GGT, prothrombin index, and urea

Results Provided

Score ranges from 0 to 1 (1 being the most severe stage):

Corresponding classifications are reported together with the scores:

Calculated Scores

- Fibrosis score (FibroMeter)Cirrhosis score (CirrhoMeter)
- Activity score (InflaMeter)

Metavir Classifications

F0-F4 for fibrosis/cirrhosis
A0-A3 for activity grade

Specimen and Information Required

- 3 mL serum and 1 mL citrated plasma
- Platelet count performed on EDTA whole blood



FibroMeter NAFLD (nonalcoholic fatty liver disease) assesses the stage of liver fibrosis in patients with metabolic steatosis.

Biomarkers Measured

• Platelets, ALT, AST, glucose, and ferritin

Specimen and Information Required

- 2 mL serum from overnight fasting specimen
- Platelet count performed on EDTA whole blood
- · Include patient's weight (in pounds) with sample submission

Accurate, Reproducible Results

FibroMeter outperforms other noninvasive assessments of liver fibrosis by using an expert system to detect anomalous profiles and maximize diagnostic reliability. While liver biopsy remains the reference method for managing patients with chronic liver disease, noninvasive assessment with FibroMeter can help triage patients and reduce the number of biopsies.

	≥F2	F4
AUROC	0.85-0.89	0.91
Sensitivity %	80.5-89.0	94.1
Specificity %	84.1-89.9	87.6
PPV %	82.0-86.3	68.0
NPV %	77.6-82.5	94.7

Leroy V, et al. Clin Biochem 2008, and Cales P, et al. Hepatol 2005.

Cibeo Ontro

	FibroMeter	Liver Biopsy	
Nature of Test	Noninvasive	Invasive	
Advantages	Measures global fibrosis, suitable for serial observations	Direct, evaluates coexisting pathologies	
Limitations	Indirectly measures functional liver changes	Sampling error, interobserver variability, possible hospitalization	
Risks	Very little risk	Pain, bleeding, pneumothorax, hemothorax, infection	
Cost	Less expensive than biopsy	Expensive	
Contraindications	None known	Uncooperative patient, severe coagulopathy, extrahepatic biliary obstruction, ascites, morbid obesity	

For more information, visit **aruplab.com/fibrometer**

References

- 1. Cales P, et al. A novel panel of blood markers to assess the degree of liver fibrosis. *Hepatol.* 2005;42:1373–81.
- Leroy V, et al. Diagnostic accuracy, reproducibility and robustness of fibrosis blood tests in chronic hepatitis C: a meta-analysis with individual data. *Clin Biochem.* 2008;41(16– 17):1368–76.
- 3. Naveau S, et al. Diagnostic and prognostic values of noninvasive biomarkers of fibrosis in patients with alcoholic liver disease. *Hepatol.* 2009;49:97–105.
- 4. Cales P, et al. Comparison of blood tests for liver fibrosis specific or not to NAFLD. *J Hepatol.* 2009;50:165–73.
- 5. Cales P, et al. Diagnosis of different liver fibrosis characteristics by blood tests in nonalcoholic fatty liver disease. *Liver Int.* 2010;30:1346–54.
- 6. Degos, et al. Diagnostic accuracy of FibroScan® and comparison to liver fibrosis biomarkers in chronic viral hepatitis: a multicenter prospective study (the FIBROSTIC study). *J Hepatol.* 2010;53:1013–21.
- 7. Zarski JP, et al. Comparison of nine blood tests and transient elastrography for liver fibrosis in chronic hepatitis C: the ANRS HCEP-23 study. *J Hepatol.* 2012;56:55–62.
- Leroy V, et al. Prospective evaluation of FibroTest[®], FibroMeter^{**}, and Hepascore[®] for staging fibrosis in chronic hepatitis B: comparison with hepatitis C. *J Hepatol.* 2014;61(1):28–34.
- Boursier J, et al. Combination of blood tests for significant fibrosis and cirrhosis improves the assessment of liver-prognosis in chronic hepatitis C. *Aliment Pharmacol Ther.* 2014;40(2):178–88.
- 10. Cales P, et al. Improved fibrosis staging by elastometry and blood test in chronic hepatitis C. *Liver Int.* 2014;34(6):907–17.
- 11. Cacoub P, et al. Comparison of non-invasive liver fibrosis biomarkers in HIV/HCV coinfected patients: the fibrovic study. *J Hepatol.* 2008;48(5):765–73.
- 12. Wu SD, et al. Staging of liver fibrosis in chronic hepatitis B patients with a composite predictive model: a comparative study. World J Gastroenterol. 2010;16(4):501–7.
- 13. Bonnard P, et al. Comparison of elastography, serum marker scores, and histology for the assessment of liver fibrosis in hepatitis B virus (HBV)-infected patients in Burkina Faso. *Am J Trop Med Hyg.* 2010;82(3):454–8.
- 14. Halfon P, et al. Effect of antiviral treatment on serum markers of liver fibrosis in HIV/HCV coinfected patients: the FibroVic 2 study—ANRS HC02. *Antiviral Therapy*. 2009;14(2):211–9.
- 15. Nguyen-Khac E, et al. Assessment of asymptomatic liver fibrosis in alcoholic patients using FibroScan: prospective comparison with seven noninvasive laboratory tests. *Aliment Pharmacol Ther.* 2008;28(10):1188–98.
- 16. Boursier J, et al. Comparison of eight diagnostic algorithms for liver fibrosis in hepatitis C: new algorithms are more precise and entirely noninvasive. *Hepatol.* 2012;55(1):58–67.
- 17. Chou R, Wasson N. Blood tests to diagnose fibrosis or cirrhosis in patients with chronic hepatitis C virus infection. *Ann Intern Med.* 2013;158:807–20.

More than 100 Peer-reviewed publications









FibroMeter

aruplab.com/fibrometer



500 Chipeta Way Salt Lake City, UT 84108-1221 Phone: 800-522-2787 Fax: 801-583-2712 aruplab.com

© 2023 ARUP Laboratories BD-TMC-009, Rev 5, January 2023