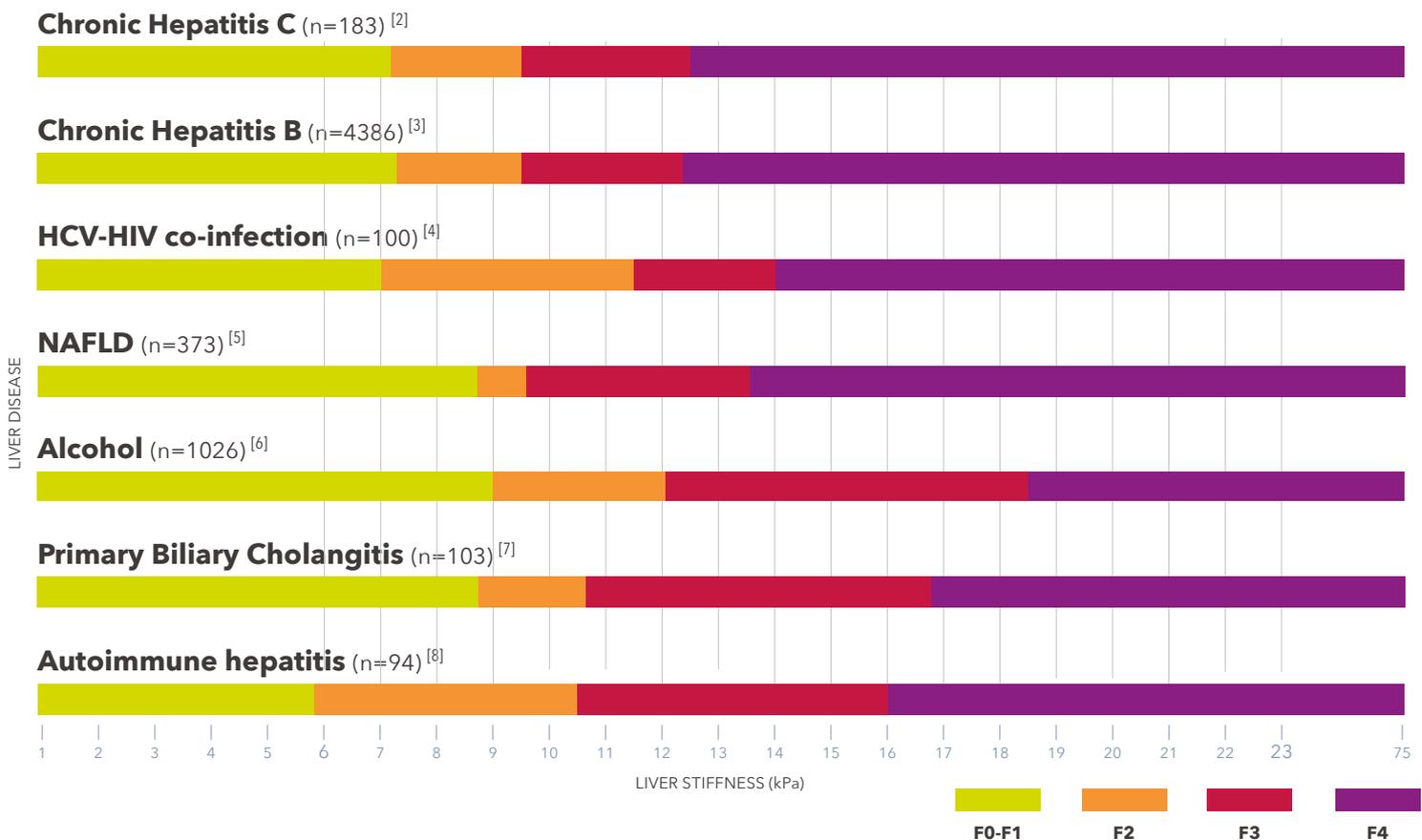


# LSM by VCTE™ Interpretation Guide

## Quantifying fibrosis with FibroScan®

- FibroScan®: medical device which measures liver stiffness (fibrosis) and CAP™ (steatosis) simultaneously on the same volume of tissue (3 cm³).
- Liver stiffness measurement with FibroScan® is a fast, reproducible, non-invasive and point of care test allowing quantification of fibrosis in patients with chronic liver diseases.
- High reproducibility of exams results, irrespective of operator (Intra-class correlation coefficient: 0.84)<sup>[1]</sup>.
- More than 2,300 peer-reviewed publications\* on liver stiffness measurement (LSM).



## Liver stiffness confounding factors<sup>[9]</sup>

- Fibrosis (portal, sinusoidal...)
- But also:
- Acute inflammation, flares, elevated transaminases
- Congestion (right sided heart failure)
- Calorie intake
- Cholestasis
- Hepatic amyloidosis

[1] Recio, E., et al. Interobserver concordance in controlled attenuation parameter measurement, a novel tool for the assessment of hepatic steatosis on the basis of transient elastography. *European Journal of Gastroenterology & Hepatology* 2013; 25 (8) : 905-11. [2] Castera, et al., Prospective comparison of transient elastography, Fibrotest, APRI, and liver biopsy for the assessment of fibrosis in chronic hepatitis C. *Gastroenterology* 2005 Feb;128(2):343-50. [3] Li, et al., Systematic review with meta-analysis: FibroScan for liver fibrosis in chronic hepatitis B. *Aliment Pharmacol Ther* 2016 Feb;43(4):458-69. doi: 10.1111/apt.13488. Epub 2015 Dec 15. [4] Sanchez-Conde, et al., Comparison of transient elastography and liver biopsy for the assessment of liver fibrosis in HIV/hepatitis C virus-coinfected patients and correlation with noninvasive serum markers. *J Viral Hepat*. 2010 Apr;17(4):280-6. doi: 10.1111/j.1365-2893.2009.01180.x. Epub 2009 Sep 2. [5] Eddowes, P, et al. Accuracy of FibroScan Controlled Attenuation Parameter and Liver Stiffness Measurement in Assessing Steatosis and Fibrosis in Patients With Nonalcoholic Fatty Liver Disease. *Gastroenterology* 2019; 156: 6: 1717-1730 [PMID: 30689971 DOI: 50016-5085(19)30105-2; 10.1053/j.gastro.2019.01.042] [6] Nguyen-Khac E, Thiele M, Voican C, Nahon P, Moreno C, Boursier J, Mueller S, et al. Non-invasive diagnosis of liver fibrosis in patients with alcohol-related liver disease by transient elastography: an individual patient data meta-analysis. *The Lancet. Gastroenterology & hepatology* 2018;3:614-625. [7] Corpechot, et al., Noninvasive elastography-based assessment of liver fibrosis progression and prognosis in primary biliary cirrhosis. *Hepatology*. 2012 Jul;56(1):198-208. doi: 10.1002/hep.25599. Epub 2012 Jun 5. [8] Hartl, et al., Transient elastography in autoimmune hepatitis: Timing determines the impact of inflammation and fibrosis. *J hepatol*. 2016 Oct;65(4):769-775. doi: 10.1016/j.jhep.2016.05.023. Epub 2016 May 26. [9] Mueller, S, et L. Sandrin, Liver stiffness: a novel parameter for the diagnosis of liver disease. *Hepatic Medicine: Evidence and Research*, 2010: p. 49-67.\* Publications published in peer-reviewed journals. You can find all the publications on liver stiffness and CAP™ on the Echosens clinical library : <http://www.echosensclinicallibrary.com/>

These guides are based on a selection of clinical studies from the existing literature reporting use of liver stiffness and CAP™ with FibroScan®. These guides are not intended to be used as a conversion table from liver stiffness and CAP™ readings in kilopascals (kPa) and decibels per meter (dB/m) to fibrosis stages and steatosis grades. These guides can in no way replace the judgment of the physician who is ultimately responsible for the final diagnosis. Echosens™ accepts no responsibility for the incorrect and/or inappropriate interpretation of liver stiffness or CAP™ values. FibroScan® is a class IIa medical device according to Directive EEC/93/42 and is manufactured by Echosens™. This device is designed to be used in a physician's office to measure the stiffness and ultrasonic attenuation of the liver in patients with liver disease. It is expressly recommended to carefully read the guidance and instruction of the users' guide and labeling of the device. Results obtained must be interpreted by a physician experienced in dealing with liver disease, taking into account the complete medical record of the patients. This marketing material is not intended for US audience. CE 0459 ISO 13485 - Echosens™, FibroScan®, are trademarks of Echosens™ Company. © Copyright Echosens™ all rights reserved - IG V1 2001

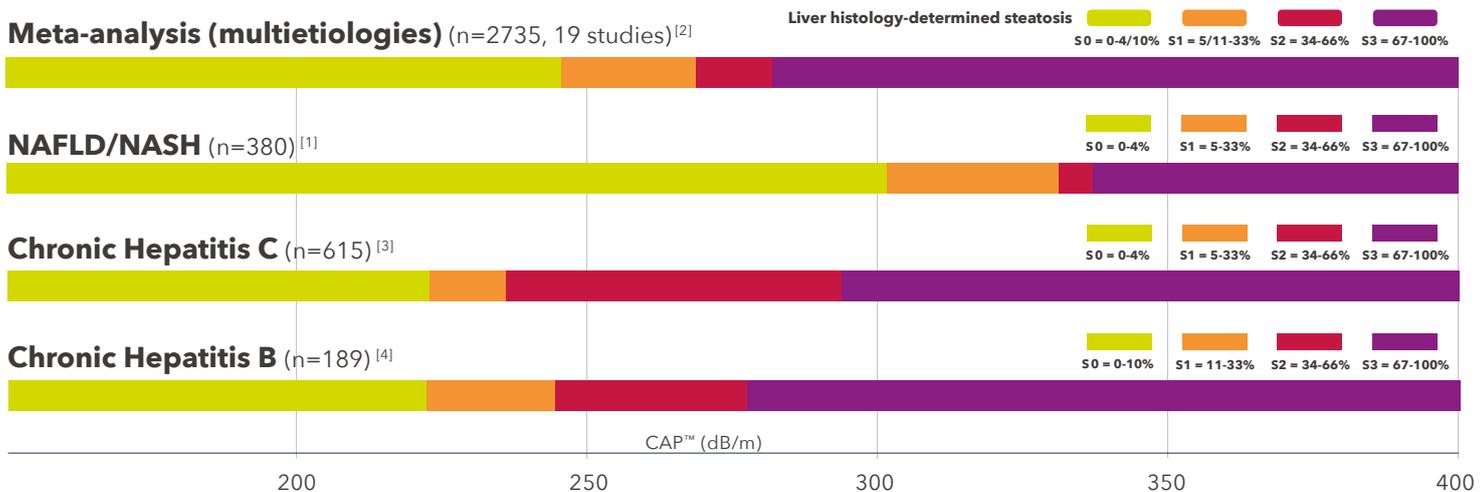
# CAP<sup>™</sup>

## Interpretation Guide

### Quantifying steatosis with FibroScan<sup>®</sup>

- CAP<sup>™</sup> measurement with FibroScan<sup>®</sup> is a fast, reproducible, non-invasive and point of care test allowing quantification of steatosis in patients with NAFLD and other fatty liver diseases.
- The existing literature demonstrates that CAP<sup>™</sup> values correlate with the **amount of steatosis**<sup>[2]</sup>.
- **Early detection** of minimal hepatic steatosis: from 5% onwards (Ultrasound allows to detect from 30% only).
- **Valuable insights** for patient monitoring during therapy, intervention or lifestyle change<sup>[5,6]</sup>.
- CAP<sup>™</sup> not influenced by fibrosis and inflammation<sup>[1]</sup>.

### Meta-analysis (multietiological) (n=2735, 19 studies)<sup>[2]</sup>



myFibroScan



Free app

**Interpretation Guides  
are available on  
myFibroScan app**

[1] Eddowes, P. et al. Accuracy of FibroScan Controlled Attenuation Parameter and Liver Stiffness Measurement in Assessing Steatosis and Fibrosis in Patients With Nonalcoholic Fatty Liver Disease. Gastroenterology 2019; 156: 6: 1717-1730 [PMID: 30689971 DOI: S0016-5085(19)30105-2; 10.1053/j.gastro.2019.01.042] [2] Karlas, T. et al. Individual Patient Data Meta-Analysis of Controlled Attenuation Parameter (CAP<sup>™</sup>) Technology for Assessing Steatosis. Journal of Hepatology 2016 ; In Press.[3] Sasso, et al. Novel controlled attenuation parameter for noninvasive assessment of steatosis using Fibroscan - validation in chronic hepatitis C. J Viral Hepat 2012 Apr;19(4):244-53. doi: 10.1111/j.1365-2893.2011.01534.x. Epub 2011 Oct 13. [4] Chen, et al. Controlled attenuation parameter for the detection of hepatic steatosis in patients with chronic hepatitis B. Infect dis. (Lond) 2016 Sep;48(9):670-5. doi: 10.3109/23744235.2016.1165860. Epub 2016 May 31. \* Publications published in peer-reviewed journals. You can find all the publications on liver stiffness and CAP<sup>™</sup> on the Echoscens clinical library: <http://www.echosensclinicallibrary.com/> [5] Paul J, et al. Measurement of Controlled Attenuation Parameter: a surrogate marker of hepatic steatosis in patients with non alcoholic fatty liver disease on lifestyle modification - a prospective follow-up study. Arq Gastroenterol None; 55: 1: 7-13 [PMID: 29561981 DOI: S0004-28032018000100007] [6] Park HE, et al. Clinical significance of hepatic steatosis according to coronary plaque morphology: assessment using controlled attenuation parameter. J. Gastroenterol. 2019; 54: 3: 271-280 [PMID: 30284617 DOI: 10.1007/s00535-018-1516-5]. [6] Shimizu, et al. Evaluation of the effects of dapagliflozin, a sodium-glucose co-transporter-2 inhibitor, on hepatic steatosis and fibrosis using transient elastography in patients with type 2 diabetes and non-alcoholic fatty liver disease. Diabetes Obes Metab 2019; 21: 2: 285-292 [PMID: 30178600]

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