Liver Fat and Iron Concentration
Gastro-Intestinal Suite

Virtual liver biopsy

At Quibim, we believe evidence-based research and technological innovation combined together help save lives. We are on a mission to improve human health through AI-guided precision medicine.

Chronic diffuse liver disease is a leading cause of morbidity, death, and medical resource utilization. Steatosis is a prominent characteristic in different liver diseases and is the histopathologic hallmark of non-alcoholic fatty liver disease (NAFLD), the most common liver condition. Patients with widespread liver disease and metabolic problems frequently have abnormal liver iron deposits. Despite the significant frequency of chronic liver disease, histopathological examination remains the standard reference for determining the severity of the disease. However, due to sample mistakes, interobserver variability, and low patient acceptability, liver biopsy is an intrusive treatment with limits.

As a solution, the automation of the MRI whole-liver segmentation provides accurate quantitative measurements for steatosis and iron grading in chronic liver disease and correlated with digital pathology[1].

Efficient, Effective & Accurate:

- Full integration with clinical workflow and PACS.

- AI-assisted whole abdomen and liver segmentation.

- Fat and iron quantification in seconds.

[1] Martí-Aguado D, Jiménez-Pastor A, Alberich-Bayarri Á, et al. Automated Whole-Liver MRI Segmentation to Assess Steatosis and Iron Quantification in Chronic Liver Disease [published online ahead of print, 2021 Nov 16]. Radiology. 2021;211027. doi:10.1148/radiol.2021211027

Quibim

Quibim's Liver Fat and Iron Concentration tool forms part of the Gastro-Intestinal Suite, an automated post-processing solution, to provide quantitative measurements in different clinical scenarios across the whole liver.

Quantitative information, enhanced confidence
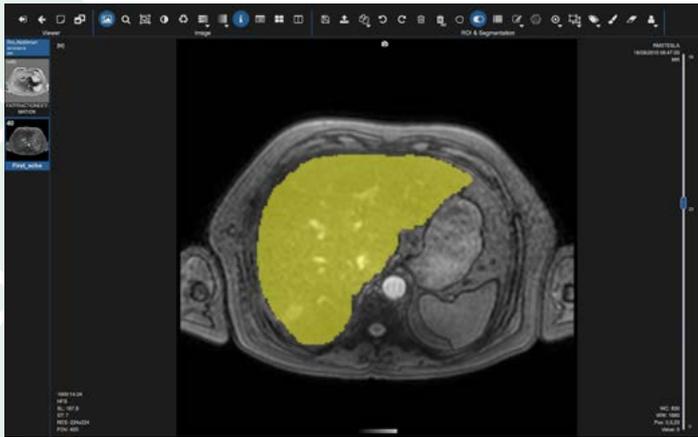
The Liver Fat and Iron Concentration tool runs a fully automatic analysis of abdominal MRI examinations containing a multi-echo chemical shift (MECSE) sequence with the help of AI.

PDFF and Iron concentration

The solution quantifies the amount of fat and iron in the liver, with the highest correlation to liver biopsy controlling all possible confounders[2].

AI segmentation

The tool automates the whole abdomen and liver segmentation, speeding up the time-consuming task of performing the segmentation manually.

Accurate diagnosis, effective reporting

The Liver Fat and Iron Concentration tool generates parametric maps of fat and iron with voxelwise resolution and a structured quantitative report comparing the liver values of these imaging biomarkers to normative data.

The tool quantifies iron, fat and water concentration for evaluating steatosis and iron overload, improving the quality of the radiologist's reports and the accuracy of their diagnoses.
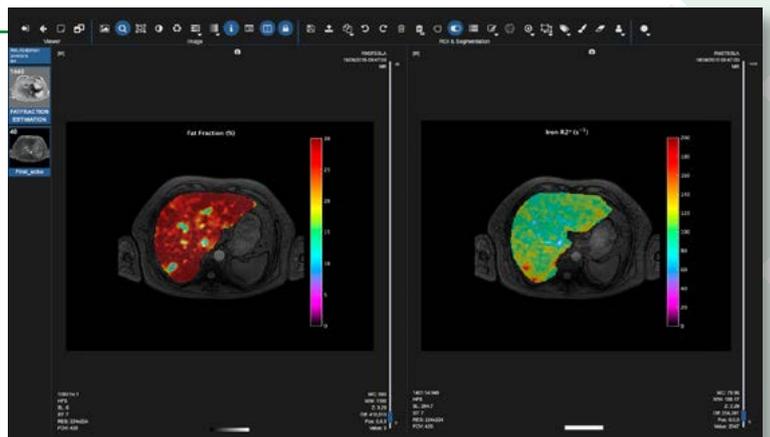
Structured reporting

We personalize your results in a quantitative report with the most suitable parameters for better patient care in daily clinical practice.

[2] França M, Alberich-Bayarri Á, Martí-Bonmatí L, et al. Accurate simultaneous quantification of liver steatosis and iron overload in diffuse liver diseases with MRI. Abdom Radiol (NY). 2017;42(5):1434-1443. doi:10.1007/s00261-017-1048-0

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Book a demo to learn more about our automated analysis tool

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