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Assessment of hepatic steatosis by controlled attenuation parameter using the M and XL probes: an individual patient data meta-analysis

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Summary

Background

Diagnostic tools for liver disease can now include estimation of the grade of hepatic steatosis (S0 to S3). Controlled attenuation parameter (CAP) is a non-invasive method for assessing hepatic steatosis that has become available for patients who are obese (FibroScan XL probe), but a consensus has not yet been reached regarding cutoffs and its diagnostic performance. We aimed to assess diagnostic properties and identify relevant covariates with use of an individual patient data meta-analysis.

Methods

We did an individual patient data meta-analysis, in which we searched PubMed and Web of Science for studies published from database inception until April 30, 2019. Studies reporting original biopsy-controlled data of CAP for non-invasive grading of steatosis were eligible. Probe recommendation was based on automated selection, manual assessment of skin-to-liver-capsule distance, and a body-mass index (BMI) criterion. Receiver operating characteristic methods and mixed models were used to assess diagnostic properties and covariates. Patients with non-alcoholic fatty liver disease (NAFLD) were analysed separately because they are the predominant patient group when using the XL probe. This study is registered with PROSPERO, CRD42018099284.