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# HOW DO NON-INVASIVE FIBROSIS SCORING SYSTEMS COMPARE WITH TRANSIENT ELASTOGRAPHY IN THE DIAGNOSIS OF FIBROSIS IN PATIENTS WITH NON ALCOHOLIC FATTY LIVER DISEASE

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**Introduction** Non-alcoholic fatty liver disease (NAFLD) is a major cause of liver disease in the western world with a subgroup of patients developing fibrosis (NASH). The gold standard for the assessment of liver fibrosis is liver biopsy, which is invasive, subject to sampling error, interobserver and intraobserver variability and impractical for screening. Several non-invasive fibrosis scoring systems have been proposed to identify advanced fibrosis in patients with NAFLD. Transient elastography (TE) has a high negative predictive value for advanced fibrosis and has been suggested for non-invasive screening. Accurate evaluation of liver fibrosis in patients with NAFLD is important to identify patients who may develop complications. The aim of this study was to compare the performance of four non-invasive fibrosis scoring systems (BFS) with TE.

**Methods** Patients attending the hepatology clinic with a positive diagnosis of NAFLD were identified. Data from TE assessment was compared with BFS scores using four scores ALT/AST, BARD, FIB-4 and NAFLD score. The TE cut off stiffness score for no fibrosis was <6 kPa 6–14 kPa for mild-moderate fibrosis (MMF) and >14 kPa for cirrhosis. The authors defined

no fibrosis if all BFS were negative and severe fibrosis, if at least 3 out of 4 BFS systems were positive for fibrosis. 1 or 2 positive BFS was considered as suggestive of MMF.

**Results** 61 patients underwent TE. Poor quality readings (IQR of >2 or >25% of median) were excluded (n=19) and 42 patients were included in the study. The average age was 50 years, average BMI of 32.3 and 19 patients had diagnosis of DM. Two patients had TE scores of over 14 kPa consistent with cirrhosis and these patients had BFS markers (3 out of 4 positive) consistent with advanced fibrosis (100%). 32 patients had MMF range readings on TE and only 9 patients would have been classified with MMF using BFS markers (28.1%). Of the remaining 23 patients, 19 patients would have been classified as no fibrosis (59.4%) and 4 patients would have been classified as advanced fibrosis using BFS markers (12.5%). 8 patients had TE scores consistent with no fibrosis and only 5 patients would have been classified as such using BFS markers (62.5%), 2 patients would have been classified as advanced fibrosis (25%) and 1 patient would have been classified as MMF (12.5%).

**Conclusion** A number of patients in this cohort would have been classified very differently depending on whether TE or BFS was used. The National Liver strategy is recommending that patients with suspected liver disease in primary care undergo a liver screen which should include a marker or measure(s) of liver fibrosis. This study suggests that approaches using BFS or TE are not interchangeable.

**Competing interests** None.

**Keywords** liver fibrosis, Non alcoholic fatty liver disease.