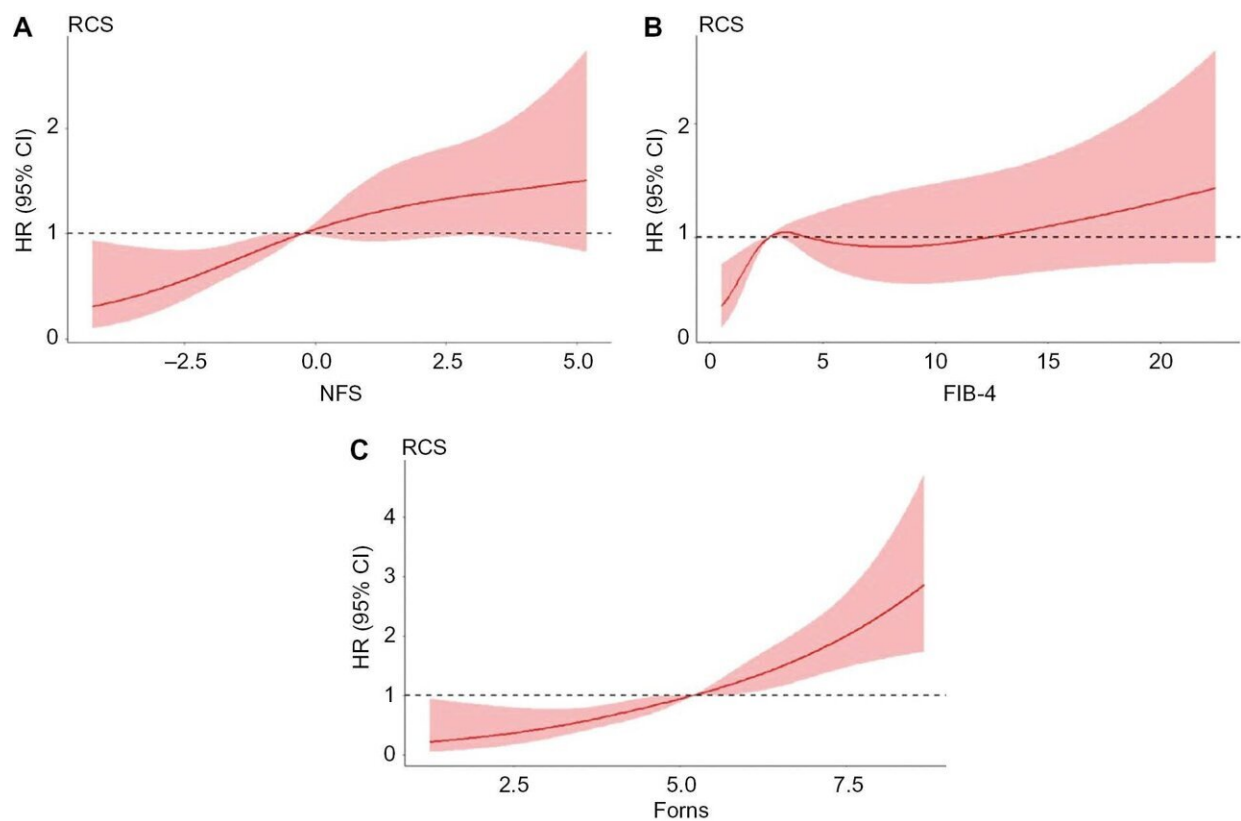# Liver fibrosis scores as predictors of long-term outcomes in patients with ST-segment elevation myocardial infarction

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Restricted Cubic Spline Plot of Liver Fibrosis Scores and Risk of MACEs. (A) NFS; (B) FIB-4; (C) Forns score. NFS, nonalcoholic fatty liver disease fibrosis score; FIB-4, fibrosis-4. Credit: *Cardiovascular Innovations and Applications* (2024). DOI: 10.15212/CVIA.2023.0095

Liver fibrosis scores (LFSs) are novel tools for predicting cardiovascular events in patients with coronary artery disease. A study appearing in [Cardiovascular Innovations and Applications](#) aimed at examining the prognostic value of LFSs in patients with ST-segment elevation myocardial infarction (STEMI).

Between 2015 and 2019, 866 patients diagnosed with STEMI were consecutively enrolled. The definition of major [cardiovascular events](#) (MACEs) was all-cause death, nonfatal [myocardial infarction](#), nonfatal ischemic stroke, and acute limb ischemia.

The authors evaluated the predictive values of LFSs for MACEs with receiver operating characteristic (ROC) curve and restricted cubic spline (RCS) analysis. Kaplan-Meier (K-M) analysis was conducted to explore the relationship between LFSs and MACEs.

During a median follow-up of four years, 155 MACEs were observed. K-M analysis of MACEs revealed significantly lower event-free survival rates in patients with intermediate or high, rather than low, NFS, FIB-4, BARD, and Forns scores.

The multivariable-adjusted hazard ratios (95% CI) for MACEs in patients with high versus low risk scores were 1.343 (0.822–2.197) for NFS, 1.922 (1.085–3.405) for FIB-4, 2.395 (1.115–5.142) for BARD, and 2.271 (1.250–4.125) for Forns.

The ROC curve indicated that the predictive ability for MACEs was non significantly improved by addition of the NFS (AUC = 0.7274), FIB-4 (AUC = 0.7199), BARD (AUC = 0.7235), and Forns (AUC = 0.7376) scores into the basic model (AUC = 0.7181). RCS revealed a tendency toward a nonlinear positive association of MACEs with NFS, FIB-4, and particularly Forns scores.

LFSs have potential utility for predicting adverse outcomes in patients with STEMI, thus indicating the importance of managing metabolic dysregulation.

More information: Longyang Zhu et al, Liver Fibrosis Scores as Predictors of Long-term Outcomes in Patients with ST-segment Elevation Myocardial Infarction, *Cardiovascular Innovations and Applications* (2024). DOI: 10.15212/CVIA.2023.0095

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