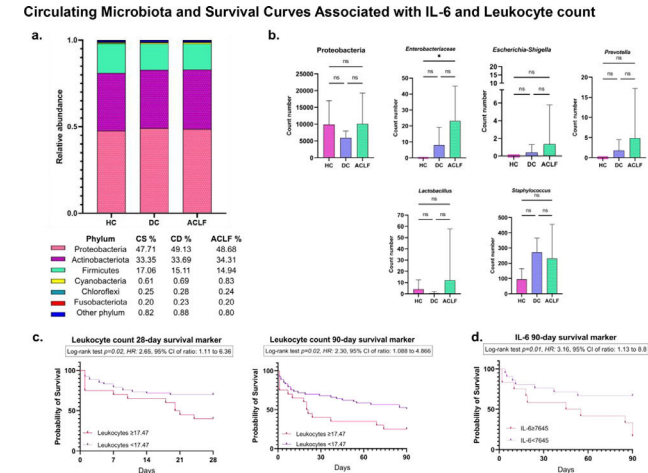


Circulating Microbiota and Survival Curves Associated with IL-6 and Leukocyte count



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#34

ARTIFICIAL INTELLIGENCE IN PREDICTING THE RISK OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH METABOLICALLY ASSOCIATED STEATOTIC LIVER DISEASE: DEVELOPMENT AND VALIDATION OF A PREDICTIVE MODEL IN 306 PATIENTS

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Introduction and Objectives: To evaluate the accuracy of an artificial intelligence (AI) model, based on routine clinical and laboratory data, in predicting the risk of developing hepatocellular carcinoma (HCC) in patients with Metabolically Associated Steatotic Liver Disease (MASLD). Our aim was to create and validate a tool to support risk stratification and facilitate early surveillance of high-risk individuals.

Materials and Methods: This was a retrospective case-control study including 306 MASLD patients divided into an HCC group (129 patients), with diagnosis confirmed by histopathological criteria or LI-RADS classification, and a control group (177 patients). Collected variables included age, body mass index, comorbidities (diabetes mellitus, dyslipidemia, presence of portal hypertension), and serum laboratory parameters: aspartate aminotransferase (AST), alanine aminotransferase (ALT), albumin, creatinine, platelets, cholesterol (HDL, LDL, and triglycerides), and non-invasive indices: neutrophil-to-lymphocyte ratio (NLR), FIB-4, and AST/ALT ratio. The XGBoost (Extreme Gradient Boosting) AI algorithm was implemented, and the dataset was randomly split into a training cohort (80%) and an

internal validation cohort (20%) to develop and assess the model's performance.

Results: The AI model demonstrated high discriminative ability for HCC, achieving an area under the ROC curve (AUC-ROC) of 0.9, with a sensitivity of 90.9% and specificity of 84.3%. The strongest predictors of HCC were serum creatinine, followed by the presence of portal hypertension, elevated NLR, and LDL levels.

Conclusions: The AI-driven model, developed using widely available clinical and laboratory parameters, demonstrated excellent performance in identifying MASLD patients at high risk of developing hepatocellular carcinoma. By enabling early and cost-effective risk stratification, this tool may support targeted surveillance strategies and improve clinical decision-making in real-world hepatology practice.

Conflict of interest: None

Model	AUC-ROC	Sensitivity (%)	Specificity (%)
MASLD-HCC Score (Our Model)	0.9	90.9	84.3
GALAD	0.92	82.0	89.0
AFP	0.83	61.0	86.0
Ultrasound (US)	0.81	63.0	97.0
AFP + US	0.83	69.0	95.0
HCC Risk Score	0.89	89.4	71.4
aMAP	0.85	96.0	64.0

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#37

EFFICACY AND SAFETY OF ILEAL BILE ACID TRANSPORTER INHIBITORS IN ADULTS WITH AUTOIMMUNE CHOLESTATIC LIVER CONDITIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction and Objectives: Autoimmune cholestatic liver diseases (ACLD), including primary biliary cholangitis (PBC) and primary sclerosing cholangitis (PSC), involve chronic bile duct injury and impaired bile flow, reducing quality and expectancy of life. Pruritus affects 20–70% of patients and is often resistant to treatment. Ileal bile acid transporter (IBAT) inhibitors, which reduce intestinal bile acid reabsorption, have emerged as a promising option for relieving cholestatic itch. This systematic review and meta-analysis evaluated the efficacy and safety of IBAT inhibitors in adults with ACLD.

Materials and Methods: A systematic review was conducted according to PRISMA guidelines using PubMed, Embase, and Cochrane-CENTRAL. Included studies enrolled adults with ACLD and pruritus lasting ≥12 weeks, treated with IBAT inhibitors. The primary outcome was change in pruritus severity (5-D Itch Scale). Secondary outcomes included sleep disturbance, serum bile acids, hepatic enzymes, and adverse events. Heterogeneity was assessed with I² and Cochrane Q tests.