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ABSTRACTS BOOK 2026

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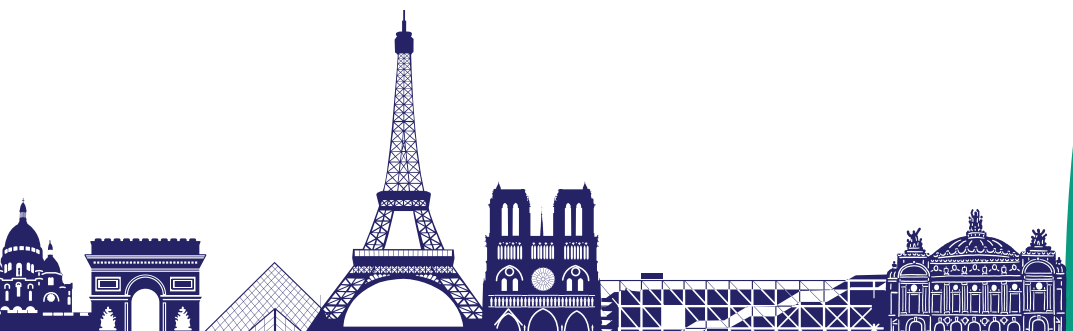
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ABSTRACT N°1

TITLE: STATINS IN CIRROSOSIS AND ITS COMPLICATIONS: AN UMBRELLA REVIEW AND METANALYSIS OF SYSTEMATIC REVIEWS

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KEYWORDS

STATINS, CIRRHOSIS, UMBRELLA REVIEWS, HCC

OBJECTIVES

Statins have been proposed as hepatoprotective agents in cirrhosis, but evidence from systematic reviews is inconsistent and often overlapping. We conducted an umbrella review to synthesise available data and address study overlap.

METHODS

We searched PubMed, EMBASE, and the Cochrane Library up to December 2024 for systematic reviews of statin therapy in cirrhosis. Quality was assessed with AMSTAR-2, study overlap was quantified using corrected covered area (CCA) and reduced through hierarchical exclusion prioritising methodological rigour, comprehensiveness, and recency. Random-effects meta-analyses were performed with comprehensive bias assessment.

RESULTS

Of 847 records screened, 13 systematic reviews (168 unique studies; 10.736.270 participants from 34 countries) were included after overlap adjustment (final CCA = 4.41%). Statins were associated with a substantial reduction in hepatocellular carcinoma risk (HR 0.53, 95% CI 0.48–0.59, I^2 = 46.7%) and hepatic decompensation (HR 0.54, 95% CI 0.49–0.59, I^2 = 0.1%). Geographic heterogeneity was significant: Asian populations showed stronger benefits (HCC: HR 0.49, 95% CI 0.45–0.53, I^2 = 0%) compared to Western populations (HR 0.71, 95% CI 0.52–0.96, I^2 = 95.7%, p for subgroup difference = 0.003). All-cause mortality was reduced (HR 0.65, 95% CI 0.52–0.81) but with substantial heterogeneity (I^2 = 80%). Leave-one-out sensitivity analysis confirmed the robustness of HCC findings (HR range 0.51–0.56). Publication bias assessment showed no significant asymmetry.

CONCLUSIONS

This umbrella review demonstrates robust associations between statin use and reduced risks of HCC and hepatic decompensation in cirrhosis, with particularly strong effects in Asian populations. These findings support continuing statin therapy in patients with compensated cirrhosis for both cardiovascular and potential hepatoprotective benefits. Future research should explore the mechanisms underlying geographic differences and establish optimal dosing strategies. The development of LDL-cholesterol targets for hepatoprotection represents an important area for future investigation.

ABSTRACT N°2 1/2

TITLE: DUAL ROLE OF ANTIOXIDANT ASTAXANTHIN MEDIATED NRF2 ACTIVATION IN MASH AND MASH-INDUCED HCC

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KEYWORDS

MASH, HCC, ROS, NRF2, ASTAXANTHIN

ABSTRACT N°2 2/2

OBJECTIVES

The global rise in obesity across industrialized countries over recent decades has led to a marked increase in metabolic disorders that profoundly impact liver function. Among these, metabolic dysfunction–associated steatotic liver (MASL) disease and its progressive form, metabolic dysfunction–associated steatohepatitis (MASH), have become the most prevalent chronic liver diseases worldwide, affecting nearly 38% of the population. MASH is defined by the excessive accumulation of triglycerides and glucose within hepatocytes, which subsequently promotes cellular injury, inflammation, and fibrogenesis. Over time, these processes can drive progression to fibrosis, cirrhosis, and hepatocellular carcinoma (HCC). Oxidative stress represents a central pathogenic mechanism in MASH. Excessive production of reactive oxygen species (ROS) damages DNA, lipids, and proteins, thereby promoting mutagenesis, sustaining inflammation, and facilitating malignant transformation.

METHOD

SIn our in vivo studies, prophylactic treatment with the anti-oxidant xanthophyll carotenoid astaxanthin effectively prevented MASH development in a mouse model subjected to six months of choline-deficient high-fat diet (CD-HFD) feeding.

RESULTS

Proteomic analysis revealed that this protective effect was primarily mediated through activation of the Nrf2 signalling pathway and subsequent enhancement of antioxidant defences. Consistently, mice with constitutively active Nrf2 in hepatocytes were also protected from MASH develompent under six months of CD-HFD exposure. In contrast, when astaxanthin was administered during established hepatocarcinogenesis (15 months of CD-HFD), antioxidant treatment increased tumour burden and accelerated cancer progression.

CONCLUSIONS

Collectively, these findings underscore the context-dependent dual role of redox modulation in liver disease progression and hepatocellular carcinogenesis. Therefore, timing of anti-oxidant therapy in the context of MASH has to be considered carefully.

ABSTRACT N°3

TITLE: ER STRESS SENSOR ATF6A IS DECISIVE FOR T CELL TUMOR IMMUNOSURVEILLANCE IN MASH-HCC

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KEYWORDS
MASH-HCC, IMMUNOSURVEILLANCE, CAR T CELLS

OBJECTIVES
ATF6 is an ER-stress sensor, which participates in the Unfolded Protein Response (UPR). Under conditions of infection, inflammation and cancer, ATF6α activation is found to be elevated in distinct subsets of T cells in preclinical models and human patients (unpublished data). Since T cell function is characterized by the secretion of cytokines - produced and maturated in the ER- , ER abnormalities might affect T cell character. Here, we investigated the competence of T cells with high ATF6α activation in the context of MASH (metabolic dysfunction- associated steatohepatitis) and subsequent live cancer.

METHODS
Mice with T cell-specific ATF6α activation or depletion were fed with CD-HFD (choline-deficient high fat diet) for 12 months and their systemic and local liver immunity was interrogated throughout the course of the treatment.

RESULTS
Mice with T cell-specific ATF6α activation, upon feeding with CD-HFD for 12 months, are protected from hepatitis and liver cancer, when compared to their wild type littermates. Immunophenotyping of Atf6α overexpressing T cells, revealed an increase of the effector and central memory T cell subsets, accompanied by elevated secretion of cytotoxic cytokines. In contrast, mice devoid of ATF6α in their T cells, display increased liver cancer incidence, with concomitant upregulation of terminal exhaustion markers and Treg polarization.

CONCLUSIONS
These results could suggest a decisive role for Atf6α expression in T cells for tumor immunosurveillance and holds promise as a potential candidate for ameliorating anti-tumor efficacy of CAR-T cells. In summary, ATF6α activation in T cells promotes increased differentiation into effector/ memory T cells and higher cytokine production, while preventing their immunosuppressive shift, functionally resulting in more effective immunosurveillance against MASH-HCC.

ABSTRACT N°4

TITLE: CURRENT MANAGEMENT OF ACUTE ALCOHOLIC HEPATITIS IN FRANCE

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KEYWORDS
ACUTE, ALCOHOLIC HEPATITIS

OBJECTIVES
The objectives of this prospective multicentre study conducted in general hospitals, university hospitals were to collect the results of a prospective cohort of patients (pts) with acute alcoholic hepatitis (AAH)

METHODS
From October 2022 to March 2024, a pre-established anonymous Google questionnaire to be completed for each patient with AAH was sent to participating departments. Patients with severe AAH are the subject of this analysis. The results were expressed as mean ± standard deviation; a multivariate analysis was performed.

RESULTS
358 patients with severe AHF were included in this analysis. 266 (64.3%) were from a university hospital. Mean age 54 years (10). H 246 (74.2%). Mean TP 37% (12.3). The Maddrey score was 68.5 (45.4). 86.4% of patients were in Pugh stage C. Average MELD score 25.4 (6.34). 82.1% underwent TLB (215). TLB was performed much more often in university hospitals than in general hospitals (215 (82.1) vs 56 (51), $p < 0.01$). There was no difference in the use of NAC between university hospitals and general hospitals. Sixty-nine patients (19.2%) received NAC-C treatment. The PT of these patients was lower, 33.4 (11.6) vs. 37.5 (12), $p = 0.01$. 87 patients (24.3%) were transferred to a TC. Transfer to a TC was much more common in patients followed at a CHU: 78 (30%) vs. 9 (10%), $p<0.001$; in cases of high MELD score (1.01 [1 to 1.01, $p = 0.0013$], Child-Pugh score C (3.75 [1.45-13.1, $p = 0.001$].
Transfer to TC was also more common in cases where C was discontinued in the event of an intermediate score on day 7: 4.70 [2.27-10.6, $p < 0.01$]; whereas patients who received NAC were transferred less often (9.52%, 23%) [0.36-0.15, 0.75, $p < 0.02$].
In multivariate analysis, transfer to TC was less common in cases treated with NAC-C (0.14 [0.04-0.5, $p = 0.003$]) and more common in cases where C was discontinued on day 7 in cases with an intermediate score (3.58 [1.27-10, $p = 0.015$]).

CONCLUSIONS
Potential benefits of routine LB, combination of NAC/C and prolongation in cases of intermediate Lille score to reduce transfers to liver transplant centers should be evaluated.

ABSTRACT N°5 1/2

TITLE: HIGH PREVALENCE OF METABOLIC DYSFUNCTION ASSOCIATED STEATOTIC LIVER DISEASE IN TRIVANDRUM COHORT 3)

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KEYWORDS
MASLD PREVANCE TRIVANDRUM RISK FACTORS

OBJECTIVES
MAFLD shows a high prevalence in Kerala S India and is on an increase over time. We are reporting a recent cohort of MASLD

METHODS
Between May 2022 to September 2023 , 2846 participants (Male 47.2 % and females 52.8%) were recruited through multistage cluster sampling across the whole population of Trivandrum, within the state of Kerala, South India. Data (gender, level of education, work status, marital status and religion, history of tobacco smoking/chewing and alcohol intake, height in centimetres , weight in Kg , waist circumference in cm) were collected from all inhabitants of randomly selected households over the age of 25. Liver stiffness and fat content were evaluated by Fibrotouch (FT; FibroTouch-FT5000, iLivTouch series, Wuxi Hisky Medical Technologies, China). Categorical data are presented as numbers (percentage) and continuous data as mean (SD) for normally distributed data and medians (range) for non-parametric data. Univariate and multivariate analysis to compare characteristics of the cohort with/without MASLD (using the definition laid down by EASL) was undertaken and Odds ratio with 95% confidence intervals were computed .

RESULTS
The MASLD prevalence within this population was 65.8% (95% CI 64-67.52 %%). Mean age was 51.71 years. Median Stiffness of liver >10.2 was seen in 20.5% in MASLD compared to those without MASLD (13.2%: p<0.001) . Table 1 and 2 denote the variables and the risk association.

CONCLUSIONS
MASLD is prevalent in 66% of general population and the main risk factors are obesity, diabetes and metabolic syndrome. Population based life style interventions are needed

ABSTRACT N°5 2/2

Table 1. Characteristics of those with or without MASLD

	MASLD				
	No (n=974)	Yes (n=1872)			
	Mean	sd	Mean	sd	P value
AGE	50.2	14.7	51.7	12.3	0.003
Median stiffness kPa	7.8	4.5	8.6	4.0	<0.001
UPA Median	199.6	60.9	294.0	29.1	<0.001
Body Fat (%)	29.2	16.0	32.9	12.0	<0.001
Body fat wt	19.4	11.9	22.6	7.5	<0.001
Skeletal muscle (%)	38.1	6.2	36.3	5.7	<0.001
Muscle weight	34.6	11.5	39.7	12.0	<0.001
Muscle (%)	66.9	8.9	62.8	8.4	<0.001
Muscle wt(kg)	43.3	9.3	44.6	9.1	0.080
Visceral fat %	10.0	6.9	11.9	6.1	<0.001
Waist circumference in cm	91.4	10.5	98.1	9.7	<0.001
BMI	24.4	4.2	27.5	4.1	<0.001
Fasting glucose mg/dl	124.2	51.4	145.6	68.6	<0.001
Systolic BP mm Hg	127.0	15.7	131.9	17.3	<0.001
Diastolic BP mm Hg	81.5	8.5	84.1	9.7	<0.001

Table 2. Risk factors for MASLD

MASLD					
		No	Yes	OR (univariable)	OR (multivariable)
Sex	Male	468 (34.9)	874 (65.1)	-	-
	Female	506 (33.6)	998 (66.4)	1.06 (0.90-1.23, p=0.490)	1.10 (0.94-1.29, p=0.241)
Past Covid infection	No	681 (34.3)	1305 (65.7)	-	-
	Yes	293 (34.1)	567 (65.9)	1.01 (0.85-1.20, p=0.909)	1.02 (0.86-1.21, p=0.846)
Hypothyroid	No	880 (34.8)	1646 (65.2)	-	-
	Yes	94 (29.4)	226 (70.6)	1.29 (1.00-1.66, p=0.053)	1.24 (0.96-1.62, p=0.102)
B Asthma	No	919 (34.2)	1766 (65.8)	-	-
	Yes	55 (34.2)	106 (65.8)	1.00 (0.72-1.41, p=0.986)	1.03 (0.74-1.46, p=0.858)
CAD	No	915 (33.9)	1788 (66.1)	-	-
	Yes	59 (41.3)	84 (58.7)	0.73 (0.52-1.03, p=0.070)	0.72 (0.51-1.02, p=0.064)
Medial Stiffness kPa	<10.2	845 (36.2)	1489 (63.8)	-	-
	>10.2	129 (25.2)	383 (74.8)	1.68 (1.36-2.10, p<0.001)	1.71 (1.38-2.14, p<0.001)

ABSTRACT N°6 1/2

TITLE: TRAJECTORY OF METABOLIC DYSFUNCTION ASSOCIATED STEATOTIC LIVER DISEASE OVER TWO DECADES : TRIVANDRUM COHORTS

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KEYWORDS
MASLD COHORTS TRIVANDRUM PREVALENCE

OBJECTIVES
MAFLD shows a high prevalence over time. We are reporting three cohorts of MASLD

METHODS
Three cohorts: I : 2005-2006 (484 subjects) ; II : 2013-2016 (2222 subjects) and III : May 2022 to September 2023 , 2846 participants . All were recruited through multistage cluster sampling. Using the recent criteria for MAFLD, we reanalysed the data.

RESULTS
Cohort 1: 52.9% males and 47.1% females. Metabolic risk factors included diabetes (24.8%), hypertension (50.8%) and prevalence of NAFLD (39.9%) and MASLD (38.0%);increased waist circumference (64.9%), elevated triglycerides (23.1%), low HDL (23.1%).

Cohort II: MASLD prevalence was 48.2 % (males 45.7 and females 54.3%) and the NAFLD prevalence was 49.8% .MASLD Odds ratios after adjusting for age, sex, domicile, BMI category (with normal weight as baseline), diabetes and metabolic syndrome are in Table 1.

Cohort III: MASLD prevalence was 65.8% (95% CI 64-67.52 %%). Mean age was 51.71 years. Median Stiffness of liver >10.2 was seen in 20.5% in MASLD compared to those without MASLD (13.2%: p<0.001) MASLD 65.8% (95% CI 64-67.52 %%). Age (Ref- <50 years) Ad OR (95% CI) 1.23(1.1 - 1.46);Gender (Ref- Female)Ad OR (95% CI) 2.14(1.63 - 2.47);Domicile (Ref-Rural)Ad OR (95% CI) 1.2(0.99 - 1.45; Diabetes Adj OR (95% CI) 1.77(1.41 - 2.19)Metabolic syndrome : Ad OR (95% CI) 1.57(1.23 - 1.98)

CONCLUSIONS
MASLD is prevalent in 66% of general population and the main risk factors are obesity, diabetes and metabolic syndrome. Population based life style interventions are needed

ABSTRACT N°6 2/2

Cohort II

Variable	**Unadjusted OR (95%CI)**	**p**	**Adjusted OR (95%CI)**	p
Age (Ref- <50 years)	1.4(1.18 - 1.67)	<0.001	1.21(1 - 1.47)	0.051
Gender (Ref- Female)	1.54(1.3 - 1.83)	<0.001	2.04(1.66 - 2.49)	<0.001
Domicile (Ref- Rural)	1.58(1.33 - 1.87)	<0.001	1.2(0.99 - 1.45)	0.059
BMI- Normal		<0.001		<0.001
Under weight- Normal	0.13(0.05 - 0.37)	<0.001	0.17(0.06 - 0.48)	0.001
Over weight	2.22(1.7 - 2.91)	<0.001	2.1(1.59 - 2.78)	<0.001
Obese	3.98(3.18 - 4.98)	<0.001	3.74(2.92 - 4.79)	<0.001
Diabetes	2.6(2.18 - 3.11)	<0.001	1.75(1.42 - 2.18)	<0.001
Metabolic syndrome	2.55(2.15 - 3.04)	<0.001	1.56(1.24 - 1.95)	<0.001

ABSTRACT N°7

TITLE: SCREENING FOR LIVER STIFFNESS USING FIBROSCAN AMONG DIABETES MELLITUS AS A PREVENTIVE STRATEGY

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KEYWORDS
LIVER STIFFNESS FIBROSCAN DIABETES

OBJECTIVES
Population based preventive hepatology strategy using using transient elastography has not been evaluated in S India among diabetes mellitus . We evaluated the utility of transient elastography (TE) in the primary care setting and the determinants for liver stiffness .

METHODS
Study was undertaken in the state of Kerala in a community of 12 blocks with 78 panchayats in the rural area, and the 81wards in the urban corporation area using a multistage cluster sampling .12505 participants were recruited through house to-house survey in the Scarred Liver in Trivandrum (SLIT) project . We calculated descriptive statistics of age, sex, BMI, residential area, religion, the status of pan masala chewing and cigarette smoking, alcohol intake . Liver stiffness was assessed by fibroscan (ECHOsens). Logistic regression model for odds ratio (ORs) with 95 % confidence intervals (CIs) for the presence of higher liver stiffness (7.2 or greater). A p-value of < 0.05 is considered statistically significant (SPSS statistical software).

RESULTS
5897 were males . 3131(25.03 %) had high liver stiffness (7.2 or greater).and 1183 (9.46%) had stiffness of more than 9.2. Liver stiffness (mean ± sd) was 7.5± 5.6 in males and 6.29 ± 3.7 among females and IQ range was 5.1 to 7.3 and 4.5 to 6.9 respectively. 3131 had a median stiffness of 7.2 or more and men accounted for 56.53 % ; higher median stiffness was in the rural domicile, those with a BMI of greater than 23($p<0.001$) . 22..5% had diabetes in this cohort and those with diabetes mellitus , hypertension and ischemic heart disease, any previous liver disease such as NAFLD had higher liver stiffness ($p< 0.001$) . Coffee intake was seen in 11.1% of those with higher liver stiffness but not significant. In the multivariate regression model, age greater than 60,rural domicile, male sex , BMI greater than 23 , alcohol abuse, diabetes mellitus, and any previous disease are independent risk factors for higher liver stiffness of 7.2 and above

CONCLUSIONS
High degree of liver stiffness in our population needs intervention strategies and follow up

ABSTRACT N°8

TITLE: MAGNETIC RESONANCE IMAGING PROTON DENSITY FAT FRACTION AND ELASTOGRAPHY IN METABOLICALLY ASSOCIATED STEATOTIC LIVER DISEASE

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KEYWORDS
MRI PDFF ELASTOGRAPHY MASLD

OBJECTIVES
Magnetic resonance imaging (MRI)–estimated proton density fat fraction (PDFF) is an emerging tool in quantification of liver fat. Liver fat using MRI-PDFF and fibrosis by elastography were correlated with biochemical and anthropometric parameters in MASLD.

METHODS
We included 131 subjects with MASLD patients and evaluated clinical data, anthropometry, liver profile and MR-PDFF for hepatic fat as assessed by GE Signa Pioneer 3T scanner and signal amplitudes of the water and lipid peaks at varying echo times were fitted to a mono-exponential T2 decay curve to determine water and lipid T2, and used to determine PDFF . Elastography was also carried out.

RESULTS
117 were males; age was 30-49 years in 68.4 %; mean age (SD) was 43.1 (± 10.5) ; PDFF 15.8 ± 8 (range 3-43%); MR elastography 5.4 ± 0.7; BMI 27.4 ± 3.7 ; waist circumference in cm 96.4 ± 8.3; AST (IU) 38 ± 16.8; ALT (IU) 56.2 ± 41.8. MRI-PDFF revealed hepatic steatosis as Grade 0: PDFF <6.5 (9.9%); grade 1: 6.5-17.4 (52%); grade 2: 17.4-22.1 (17%); grade 3 >22.1 (21%). PDFF was >16.8 as an indicator of severe disease in 39%. MR Elastography was ≥3.62 in 100%. AST was higher in those with PDFF >15 compared to those with fat <10 (mean ± SD) 42.4 ± 18.3 vs. (mean ± SD) 30.9 ± 11 (P= 0.012). Similarly, ALT was mean ± SD 70.4 ± 50.7 and (mean ± SD) 36.6 ± 15.4 in those with PDFF >15 versus <10 (p= 0.001).

CONCLUSIONS
Grades II and III steatosis were observed in 38% at MRI-PDFF and abnormal AST and ALT in those with PDFF >15 may indicate severe disease and need for therapy.

	N	mean ± SD	Range	Median	Inter quartile range
Age	131	43.1 ± 10.5	21 - 68	42	35 - 49
PDFF	131	15.8 ± 8	3 - 43	14	10 - 20.5
Elastography	131	5.4 ± 0.7	4.5 - 9.2	5.3	4.89 - 5.57
BMI	125	27.4 ± 3.7	18 - 42.6	27.2	25.2 - 29.3
waist	128	96.4 ± 8.3	74 - 130	96	92 - 100.3
Hip	128	98.6 ± 7.3	84 - 127	98	93.75 - 102
SGOT	126	38 ± 16.8	16 - 108	33.5	27 - 46
SGPT	126	56.2 ± 41.8	13 - 273	46	33 - 67
Cholesterol	130	203.8 ± 39.3	126 - 298	200.5	180.3 - 222.5
HDL	130	48.2 ± 9.2	29 - 78	47	42 - 54
LDL	130	132.9 ± 29.3	70 - 215	130	115 - 150
VLDL	122	29.8 ± 12.7	12 - 83	27	21 - 40
Triglycerides	130	175.3 ± 133.8	25 - 936	137	107.3 - 201

ABSTRACT N°9 1/2

TITLE: MACHINE LEARNING MODELS FOR MASH EXCLUSION USING ROUTINE LABORATORY AND ANTHROPOMETRIC DATA

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KEYWORDS
MASH, MACHINE-LEARNING, NON-INVASIVE, FAST

OBJECTIVES
Objectives: Metabolic dysfunction-associated steatohepatitis (MASH) is a progressive liver disease requiring accurate non-invasive screening methods. The FAST score (≥0.35) identifies MASH but requires specialized imaging. Machine learning models using routine clinical variables could provide accessible screening tools to exclude MASH in at-risk populations. Objective: To develop and externally validate machine learning models for MASH prediction using only routine clinical and laboratory parameters, with emphasis on achieving a high negative predictive value for safe exclusion of MASH.

METHODS
Methods: We conducted a two-cohort study comprising a training dataset (N=767, MASH prevalence 6.3%) and an independent external validation cohort (N=287, MASH prevalence 22.6%). MASH was defined by a FAST score >0.35. Univariate screening identified seven predictive variables: alanine aminotransferase (ALT), aspartate aminotransferase (AST), gamma-glutamyl transferase (GGT), body mass index (BMI), dyslipidemia status, triglycerides, and waist circumference. Three machine learning algorithms, in addition to the logistic regression model, were trained using 10-fold cross-validation repeated three times: logistic regression (GLM), elastic net (ENET), random forest (RF), and extreme gradient boosting (XGBoost). Models were evaluated on the external cohort using cutoffs derived from the training data.

RESULTS
Results: Baseline characteristics showed significant differences between MASH and non-MASH groups across both cohorts (Table 1). All models demonstrated excellent discriminative ability in external validation (Table 2), with AUCs ranging from 0.940 to 0.954. XGBoost achieved the highest AUC (0.954) with a sensitivity of 95.4%, specificity of 73.4%, and NPV of 98.2%. GLM showed the highest NPV (98.7%) with a sensitivity of 96.9% and a specificity of 67.1%. Training-validation AUC differences were minimal (0.004-0.029), indicating stable model performance across populations. Variable importance analysis revealed AST (100%), ALT (24.8%), and waist circumference (14.5%) as the most influential predictors.

CONCLUSIONS
Conclusions: Machine learning models using seven routine clinical variables achieved excellent performance for MASH prediction, with NPV exceeding 98% for GLM and XGBoost. These models are particularly valuable for excluding MASH in clinical practice, potentially reducing unnecessary specialized imaging. The high NPV (>98%) and use of readily available parameters make these tools suitable for implementation in diverse healthcare settings for initial MASH screening.

ABSTRACT N°9 2/2

Table 1. Baseline Characteristics of Study Cohorts

Variable	Training Cohort (N=767)		Validation Cohort (N=287)		P-value†
	No MASH (n=719)	**MASH** (n=48)	**No MASH** (n=222)	**MASH** (n=65)	
ALT (×ULN)*	0.42 [0.32-0.58]	1.13 [0.70-1.77]	0.54 [0.38-0.77]	1.14 [0.86-2.03]	<0.001
AST (×ULN)*	0.48 [0.38-0.60]	1.16 [0.76-1.78]	0.55 [0.43-0.71]	1.29 [0.94-2.26]	<0.001
GGT (U/L)*	22.0 [15.0-34.0]	42.0 [26.0-96.5]	26.0 [15.0-41.0]	37.0 [25.0-55.0]	<0.001
BMI (kg/m²)*	25.4 [22.4-29.3]	29.6 [24.9-34.4]	32.9 [28.3-37.5]	32.5 [28.9-38.9]	<0.001‡
Dyslipidemia, n (%)	21 (2.97%)	6 (12.5%)	13 (5.86%)	5 (7.69%)	0.005
Triglycerides (mg/dL)*	120 [85-167]	158 [118-210]	122 [89-163]	141 [100-184]	<0.001
Waist (cm)*	90.0 [81.5-99.0]	94.5 [87.5-107]	107 (14.6)§	114 (14.4)§	0.001

*Values presented as median [IQR]; †P-value for MASH vs No MASH comparison; ‡Significant in training cohort only; §Mean (SD); ULN = Upper Limit of Normal

Table 2. External Validation Performance (General Population Cohort)

Model	AUC	Cutoff*	Sensitivity	Specificity	PPV	NPV	Accuracy	F1 Score
XGBoost	0.954	0.138	95.4%	73.4%	51.2%	**98.2%**	78.4%	0.667
GLM	0.946	0.087	96.9%	67.1%	46.3%	**98.7%**	73.9%	0.627
Elastic Net	0.940	0.097	93.8%	68.9%	46.9%	97.5%	74.6%	0.626
Random Forest	0.942	0.483	72.3%	92.3%	73.4%	91.9%	87.8%	0.729

*Cutoff derived from training cohort using Youden's index; GLM = Logistic Regression; PPV = Positive Predictive Value; NPV = Negative Predictive Value

Conclusions: Machine learning models using seven routine clinical variables achieved excellent performance for MASH prediction, with NPV exceeding 98% for GLM and XGBoost. These models are particularly valuable for excluding MASH in clinical practice, potentially reducing unnecessary specialized imaging. The high NPV (>98%) and use of readily available parameters make these tools suitable for implementation in diverse healthcare settings for initial MASH screening.

ABSTRACT N°10 1/2

TITLE: PREVALENCE AND DETERMINANTS OF RESMETIROM ELIGIBILITY AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS

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KEYWORDS

T2DM, VCTE, RESMETIROM, MASH, CAP

OBJECTIVES

Background & Aims: Resmetirom was recently approved for treatment of metabolic dysfunction-associated steatohepatitis (MASH) with moderate-to-advanced fibrosis. However, the proportion of patients with type 2 diabetes mellitus (T2DM) who meet eligibility criteria using non-invasive tests (NITs) is unknown. We assessed eligibility prevalence and identified factors associated with treatment candidacy.

METHODS

We conducted a cross-sectional analysis of 166 T2DM patients who underwent vibration-controlled transient elastography between January 2023 and December 2024. Patients with viral hepatitis, cirrhosis, or significant alcohol consumption (>30 g/day for men, >20 g/day for women) were excluded. Two eligibility criteria were evaluated: Liberal (AASLD 2024): controlled attenuation parameter (CAP) ≥280 dB/m + liver stiffness measurement (LSM) ≥8 kPa + alanine aminotransferase (ALT) >17 U/L (females) or >20 U/L (males) + platelets >140×10^9/L; Restrictive (MAESTRO-NASH): CAP ≥280 + LSM ≥10 + ALT >30 + platelets >140.

RESULTS

Complete NIT data were available for 157 patients (94.6%). Median age was 47 years (IQR: 38-58), 64.5% were female, and median BMI was 31.0 kg/m² (IQR: 22.5-36.2). Median LSM was 5.7 kPa (IQR: 4.4-7.5) and median CAP was 289 dB/m (IQR: 230-340). Of 93 patients with steatosis (CAP ≥280, 56.0%), 23 (24.7%) had LSM ≥8 kPa and 17 (18.3%) had LSM ≥10 kPa. Individual criteria prevalence: CAP ≥280 (56.0%), LSM ≥8 (13.9%), LSM ≥10 (10.2%), gender-specific ALT elevation (82.5%), ALT >30 (43.4%), platelets >140 (93.4%). Eligibility rates varied significantly by BMI category (p<0.001) and FIB-4 status (p=0.008). No patients with BMI <30 kg/m² met eligibility criteria. Eligible patients (liberal criteria) had higher median BMI (41.0 vs 25.3 kg/m², p<0.001), ALT (61.1 vs 31.5 U/L, p=0.007), AST (76.8 vs 33.5 U/L, p=0.032), LSM (14.0 vs 5.6 kPa, p<0.001), CAP (353 vs 267 dB/m, p<0.001), HbA1c (9.1% vs 7.4%, p=0.002), and triglycerides (214 vs 169 mg/dL, p=0.030). In

CONCLUSIONS

Targeted screening of obese diabetic patients with elevated aminotransferases and poor glycemic control (HbA1c >7%) would optimize case detection, as this phenotype had the highest eligibility rates (>20%). Early identification through screening enables timely intervention in high-risk diabetic patients before progression to cirrhosis.

ABSTRACT N°10 2/2

Table 1. Prevalence of Resmetirom Eligibility

Criteria	n/N	Prevalence	95% CI
Liberal (CAP≥280 + LSM≥8 + ALT>17F/20M + PLT>140)	22/166	13.3%	8.5-19.4%
Restrictive (CAP≥280 + LSM≥10 + ALT>30 + PLT>140)	16/166	9.6%	5.6-15.2%

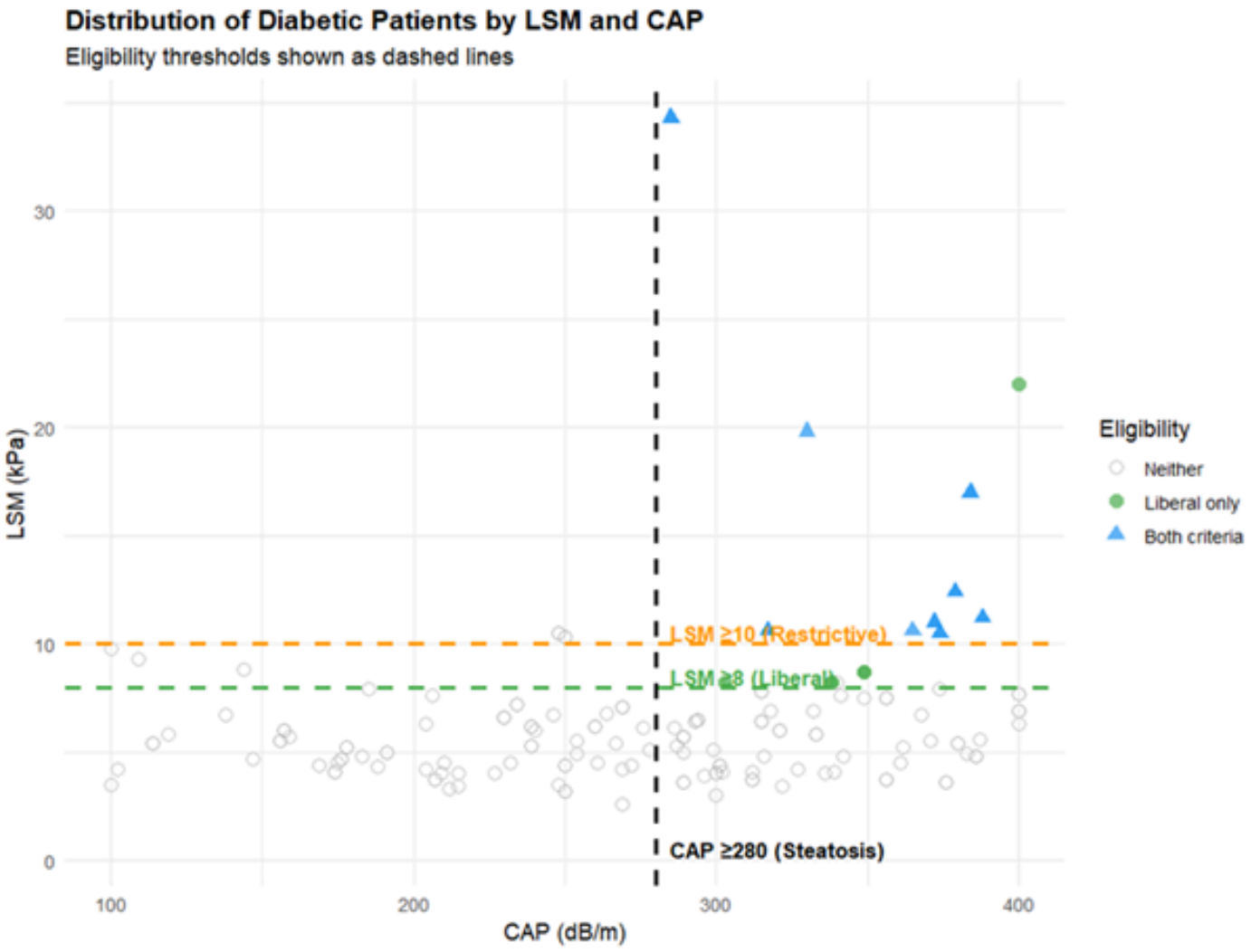
Table 2. Stepwise Cascade Analysis

Step	Liberal n (%)	Restrictive n (%)
CAP ≥280 dB/m	93 (56.0)	93 (56.0)
+ LSM threshold*	23 (13.9)	17 (10.2)
+ ALT threshold†	22 (13.3)	16 (9.6)
+ Platelets >140	22 (13.3)	16 (9.6)

*LSM ≥8 kPa (liberal), ≥10 kPa (restrictive)
†ALT >17F/20M (liberal), >30 (restrictive)

Table 3. Eligibility by Patient Subgroup

Subgroup	N	Liberal n (%)	Restrictive n (%)
Gender			
Male	59	4 (6.8)	2 (3.4)
Female	107	18 (16.8)	14 (13.1)
BMI			
<25 kg/m²	46	0 (0.0)	0 (0.0)
25-<30 kg/m²	28	0 (0.0)	0 (0.0)
≥30 kg/m²	92	22 (23.9)	16 (17.4)
FIB-4			
<1.3	81	5 (6.2)	4 (4.9)
≥1.3	70	15 (21.4)	12 (17.1)



ABSTRACT N°11 1/2

TITLE: DYNAMICS OF NONINVASIVE LIVERFAST, FIB-4 AND FIBROSCAN, DURING MONITORING RESMETIROM THERAPY IN PATIENTS WITH MASH-UPDATE.

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KEYWORDS
LIVERFAST, NONIVASIVE, RESMETIROM, VCTE, FIBROSIS

OBJECTIVES
LFAST is a new blood-based NIT that assess quantitatively fibrosis, activity, and steatosis. Aims: To assess the dynamics of LFAST, FIB-4 and VCTE and CAP in monitoring patients on-RT [fibrosis/steatosis ≥10% regression rate (10%RR) from baseline to repeated NIT].

METHODS
On-RT patients with baseline (t0) and repeated (t1) NITs have been included retrospectively. Statistics included Kaplan Meier non-parametric censored at 10% RR from t0, Tukey-Kramer Multiple-Comparison Test and subgroup analysis for dose/GLP-1 receptor agonists (GLP-1RA) analysis.

RESULTS
Eligible patients without RT discontinuation: n=86, 62% 80mg-dose, 39%-male, 55%-T2D, 46% GLP-1RA, mean(se) age 62.4(1.3), BMI 33.7(0.7), ALT 44(4), FIB4 1.79(0.14). T0-prevalence of F2F3 were 61%(LFAST) and 44%(VCTE). Median(max) delays(mths) t0-to-t1 were 3.4(LFAST), 7.6(VCTE) and 6.7(FIB4). 67pts. with t0-FIB4 had no change at t1, (1.85vs2.02), or AST (44vs36), platelets count (230vs224*109), all p=ns, and ALT (53vs40,p<0.05). 30 pts had repeated VCTE (median t0-10.7 vs t1-10.1Kpa) and CAP (t0-301 vs t1-299dB/m), all p=ns regardless the dose or the association with GLP-1RA. 44pts achieved t1-LFAST with median scores (t0vst1): fibrosis (0.48vs0.38,p<0.001), steatosis (0.50vs0.42,p<0.05), activity (0.45vs0.42,p=ns), mainly in the 80mg group (n=27) and in either groups of RT-alone or in combination to GLP-1RA for fibrosis (p<0.05). LFAST-fibrosis 10%RR from t0 has been achieved more within 80mg-RT group than within 100mg-RT at 3 and 6mths, respectively: 23.8%vs20.7% and 79.2%vs37.5%, overall logrank p<0.05). LFAST-steatosis 10%RR from t0 has been achieved more within 80mg-RT group (overall logrank p<0.05). The significant decrease t0-to-t1 in the total cholesterol has neither impacted the ApolipoproteinA1 [131 vs 146mg/dl] or LFAST-fibrosis score.

CONCLUSIONS
RT-Initiation based on NITs is efficient and allows further non-invasive monitoring. LIVERFASt is an efficient monitoring test that reflects histology remodeling and provides earlier insights into disease progression and RT response. A significant improvement (≥10%) in LIVERFASt fibrosis and steatosis scores have been observed after the 3rd month of RT mainly in the 80mg group. FIB-4 and VCTE/CAP scores showed limited change at reassessment.

ABSTRACT N°11 2/2

Fig.1a Dynamics of NITs scores for fibrosis during RT.

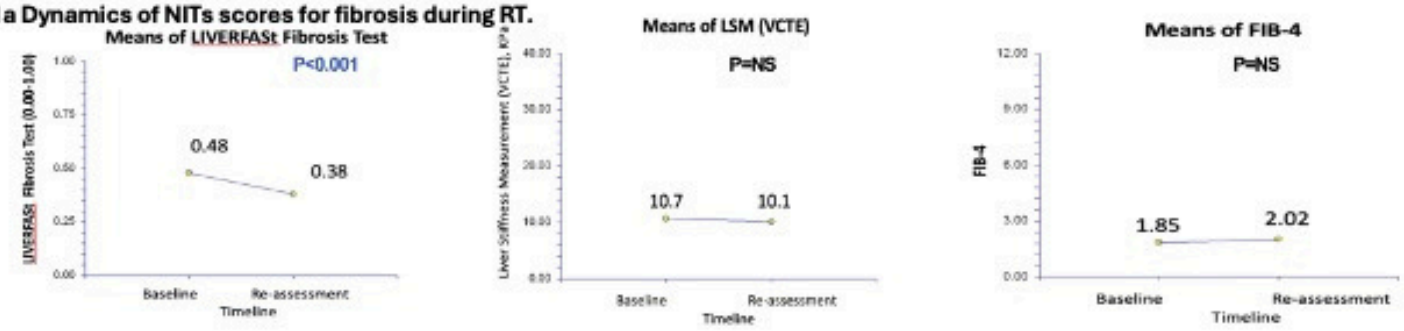


Fig.1b Dynamics of NITs scores for steatosis during RT.

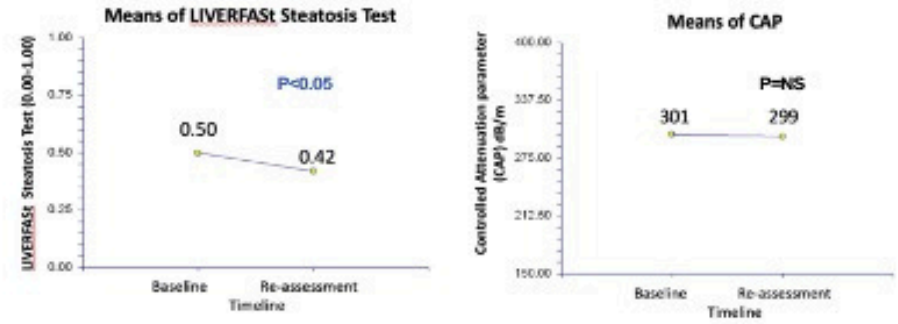
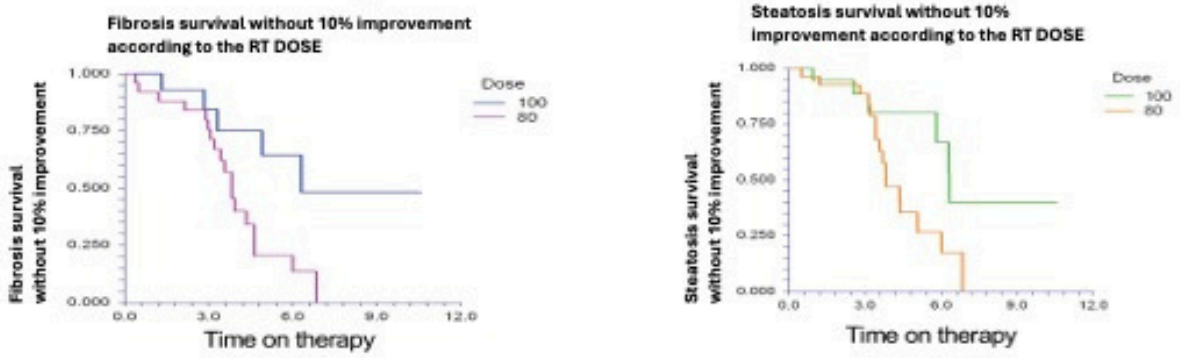


Fig.1c Cumulative incidence of achieving 10% reduction in LIVERFASt Fibrosis and Steatosis Tests.



ABSTRACT N°12

TITLE: HEPATIC STEATOSIS AND ASSOCIATED FIBROSIS ASSESSED BY FIBROSCAN IN CONGOLESE PATIENTS: EXTENT, DETERMINANTS, AND CLINICAL IMPLICATIONS

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KEYWORDS

Hepatic steatosis, FibroScan, CAP, Fibrosis, DRC.

OBJECTIVES

Hepatic steatosis and fibrosis represent major public health challenges in sub-Saharan Africa, where data based on non-invasive methods remain limited. This study aimed to evaluate, within a single Congolese cohort, the extent of hepatic steatosis, its clinical and metabolic determinants, and the performance of the APRI and FIB-4 biological scores compared to FibroScan.

METHODS

This was a multicenter cross-sectional study conducted in Kinshasa between 2022 and 2024, including 316 patients followed in hepatogastroenterology. All underwent FibroScan with CAP measurement for steatosis and liver elastography for fibrosis, as well as biological testing to calculate the APRI and FIB-4 scores. The stages of steatosis (S0–S3) and fibrosis (F0–F4) were defined according to Echosens' recommendations. Multivariate analysis identified the determinants of severe steatosis, and ROC curves assessed the diagnostic performance of non-invasive scores.

RESULTS

The mean age was 48 ± 14 years, with a male predominance (61%). The main comorbidities were obesity (37%), alcoholism (26%), diabetes (10%), hepatitis B (14%), and hepatitis C (7%). The mean CAP was 247 ± 61 dB/m, revealing a high frequency of hepatic steatosis, particularly severe in diabetic, obese, and alcoholic patients. Severe steatosis (S3) was significantly associated with age >40 years, overall and cervical obesity, hypercholesterolemia, and diabetes mellitus. Among patients with moderate to severe steatosis (S2–S3), 20% already had advanced fibrosis (F3–F4). The concordance between ultrasound and FibroScan was low. The APRI and FIB-4 scores showed good specificity but limited sensitivity for the detection of cirrhosis, with better diagnostic performance in alcoholic patients and those with viral hepatitis.

CONCLUSIONS

This study highlights a high burden of hepatic steatosis and a significant proportion of advanced fibrosis in a Congolese population at high metabolic risk. FibroScan appears to be a key tool for early detection, while APRI and FIB-4 scores should be interpreted with caution in the general population. The systematic integration of non-invasive methods is essential to improve the management of liver diseases in Kinshasa.

ABSTRACT N°13 1/2

TITLE: LONGITUDINAL FIB-4 MONITORING REDUCES UNNECESSARY FIBROSCAN® USE WITHOUT MISSING ADVANCED FIBROSIS DETECTION

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KEYWORDS

MASLD, NITs, ACLD, LIVER FIBROSIS

OBJECTIVES

To compare two different referral strategies in patients with intermediate FIB-4 values and evaluate their ability to predict progression to advanced fibrosis over approximately 5-10 years.

METHODS

We retrospectively analysed 92 patients with baseline FIB-4 between 1.3 and 2.67. Advanced fibrosis at follow-up was defined by liver biopsy showing F3-F4, when available, or by LSM ≥12 kPa. Two referral strategies were compared: (1) immediate referral if baseline LSM ≥8 kPa; (2) referral if FIB-4 remained ≥1.3 at 1-2 years. Diagnostic performance was assessed through sensitivity (Se), specificity (Sp), positive predictive value (PPV), negative predictive value (NPV), and confusion matrices.

RESULTS

Advanced fibrosis over a median follow up of 6 (2.7-13.2) years was detected in 25 patients (27%). When applied at baseline, LSM ≥8 kPa had the best diagnostic performance (Se 0.95; Sp 0.7, PPV 0.45, NPV 0.97) in predicting advanced fibrosis at last follow-up. In 19 (21%) patients, FIB-4 values declined below <1.3 at 1-2 years, despite no structured lifestyle change intervention, and none of these patients developed advanced fibrosis during follow up. Therefore, repeating FIB-4 at 1-2 years and performing LSM only if FIB-4 remains ≥1.3, would have avoided 21% of FibroScan® examinations, without any missed cases of advanced fibrosis (Se 1; Sp 0.22, PPV 0.25, NPV 0.1).

CONCLUSIONS

n FIB-4 intermediate-risk patients, repeating FIB-4 at 1-2 years prior to second-line testing can reduce unnecessary LSM by 21%, without missing advanced fibrosis cases at follow-up.

ABSTRACT N°13 2/2

Baseline characterisics	Median (IQR) or Mean ± SD or n (%)
Total patients	92
Male	40 (44%)
Age (years)	59.6 ± 8.2
BMI (kg/m²)	29.3 ± 4.5
<25 kg/m²	17 (13%)
≥25 <30 kg/m²	40 (48%)
≥30 kg/m²	34 (39%)
AST (U/L)	35 (27-47)
ALT (U/L)	43 (26-66)
Platelets (10⁹/L)	187 (164-222)
FIB-4	1.62 (1.48-1.99)
Liver stiffness (kPa)	6.9 (5.1-10.8)
F0-F1	51 (56%)
F2	23 (25%)
F3-F4	17 (19%)
CAP (dB/m)	308 (267-343)

Table 1. Baseline characteristics of the cohort.

Follow-up characteristics	mean (min-max), n (%)
Follow-up duration (years)	5.8 (2.7-13.2)
VCTE change (≥10%)	
Improved ≥10%	40 (44%)
Stable	16 (18%)
Worsened ≥10%	35 (38%)
VCTE change (≥30%)	
Improved	18 (20%)
Stable	52 (57%)
Worsened	21 (22%)
Persistent FIB-4 > 1.3 over 1-2 years	72 (79%)
ΔFIB-4 ≥ 30% after 1-2 y	
Improved	6 (7%)
Stable	74 (81%)
Worsened	11 (12%)

Table 2. Follow up caratheristics of the cohort.

ABSTRACT N°14 1/3

TITLE: PERSISTENCE, TOLERABILITY, AND RESPONSE TO RESMETIROM USING NITS IN PATIENTS WITH MASH- REAL WORLD EXPERIENCE

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KEYWORDS
RESMETIROM, PERSISTENCE, FIBROSIS, MASH, NITS

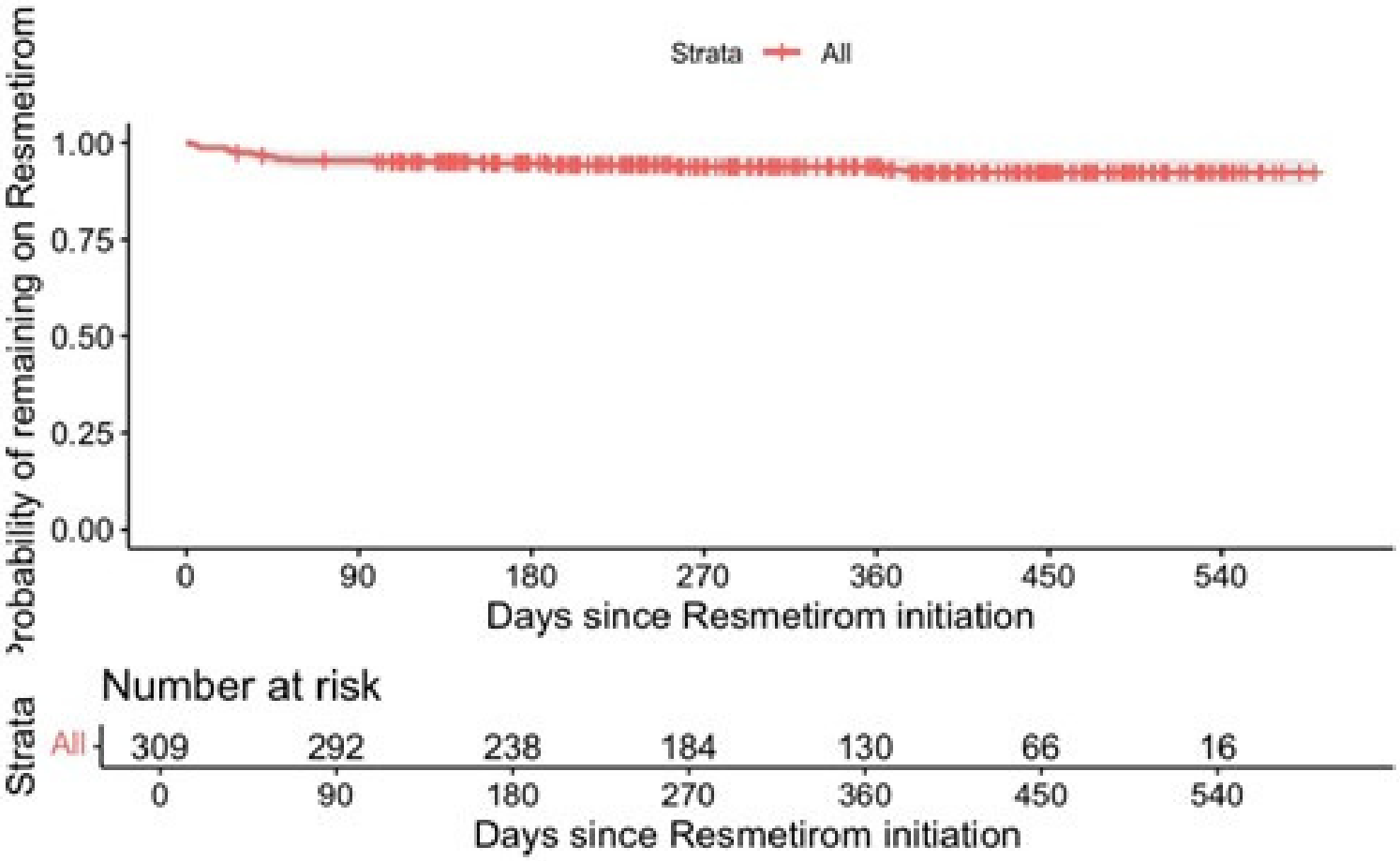
OBJECTIVES
To study the real-world persistence and tolerability of Resmetirom in large cohort of over 300 patients at a single tertiary center.

METHODS
We conducted a retrospective cohort study of adults with MASH treated with Resmetirom. Dose (≤80 vs 100 mg) and GLP-1 use were recorded. Baseline labs, FIB-4, ELF, LIVERFASt scores, FibroScan CAP/kPa, and lipids were collected. Pharmacy data defined treatment dates. Patients without a start date or with unclear discontinuation dates were excluded. Persistence at 3, 6, and 12 months was evaluated, with a Kaplan–Meier curve estimating time to discontinuation. Safety events were abstracted from chart review. NIT biomarker, and lipid changes at 3, 6, and 12 months were compared by dose and GLP-1 use using t-tests or χ^2/Fisher's tests.

RESULTS
A total of 326 patients initiated Resmetirom; approximately two-thirds received ≤80 mg and one-third 100 mg, and ~40% were on concomitant GLP-1 agonists.
Among patients with adequate follow-up, persistence was 96% at 3 months (298/312), 94% at 6 months (242/258), and 94% at 12 months (127/134). Two patients discontinued and restarted Resmetirom, with interruption intervals of 154 and 83 days. At 3 months, ≤80 mg produced larger declines in total cholesterol (−45.6 vs −6.6 mg/dL) and triglycerides (−55.2 vs +11.2 mg/dL; both p=0.01). Greater AST (−10.57 vs −1.24; p=0.04) and ALT (−12.57 vs −1.69; p=0.03) reductions occurred at 12 months with ≤80 mg. FIB-4 decreased more in GLP-1 users at 6 months (−0.16 vs 0.30; p=0.04). NIT responses using Liverfast test were quite favorable (presented in another abstract)
Resmetirom was generally well tolerated. The most frequent adverse effects were diarrhea (11%), abdominal/general GI discomfort (9%), and upper GI symptoms (8%) ; serious events such as pancreatitis and anaphylaxis were rare (≤1% each).

CONCLUSIONS
In this large real-world cohort of patients with MASH, Resmetirom demonstrated remarkably high treatment persistence through 12 months with minimal early discontinuation, supported by a flat Kaplan-Meyer curve. Both doses produced biochemical and lipid improvement, with greater AST/ALT and early lipid reductions in the ≤80-mg group and lower FIB-4 among GLP-1 users. These data support the long-term tolerability of Resmetirom in routine clinical practice and consistent NIT response.

ABSTRACT N°14 2/3



Persistence Rates throughout Time

Timepoint	Total N	N Lost to Event	Persistence Numerator/Denominator	Percent
3 month persistance	306	14	292/306	95%
6 month persistance	258	15	238/258	92%
12 month persistance	133	7	126/133	95%

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Side Effect	N	Percent (%)
Diarrhea	34	11
Abdominal pain / general GI discomfort	28	9
Upper GI symptoms (nausea / vomiting / dysphagia)	26	8
Neurologic / autonomic (dizziness/vertigo, sensory changes, autonomic issues)	12	4
Pruritus / itching	10	3
MSK-related pain	8	3
Liver enzyme elevation	7	2
Fatigue / lethargy	4	1
Peripheral edema / fluid retention	4	1
Cardiopulmonary / respiratory (chest pain, dyspnea)	3	1
Rash / dermatologic	3	1
Mood / anxiety	3	1
Constipation	2	1
Endocrine / metabolic symptoms	2	1
Hyperbilirubinemia	2	1
Anaphylaxis / hypersensitivity	1	0
Hair loss	1	0
Pancreatitis	1	0
Genitourinary infection	1	0
Early satiety / appetite change	1	0
Reflux / heartburn	1	0

ABSTRACT N°15

TITLE: PROGNOSTIC SIGNIFICANCE OF FIB-4 SCORE ON LONG-TERM MORTALITY IN HOSPITALIZED PATIENTS WITH COVID-19 PNEUMONIA

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KEYWORDS
COVID-19, FIB-4, LIVER FIBROSIS, INFLAMMATION

OBJECTIVES
COVID-19 leads to systemic inflammation, thrombosis, and multi-organ injury, extending its impact beyond the acute phase. Liver fibrosis biomarkers such as the Fibrosis-4 (FIB-4) index and the AST-to-platelet ratio index (APRI) may reflect systemic damage, yet their predictive value for long-term outcomes after COVID-19 pneumonia remains unclear. This study investigated the association between liver fibrosis biomarkers and 3-year mortality in hospitalized COVID-19 patients.

METHODS
This single-center retrospective study included 102 adults hospitalized with COVID-19 pneumonia (mean age 62.5 ± 16.5 years; 55% male). Comorbidities included hypertension (44%), diabetes mellitus (33%), and coronary artery disease (19%). Mechanical ventilation was required in 48 patients (47%). Admission laboratory parameters were used to calculate FIB-4 and APRI scores. Logistic regression was performed to identify independent predictors of 3-year all-cause mortality.

RESULTS
Over the 3-year follow-up, 57 patients (56%) died. FIB-4 values were significantly higher in non-survivors than in survivors (median [IQR]: 3.0 [3.5] vs. 1.5 [1.2]; $p < 0.001$). Among evaluated covariates (age, diabetes, hypertension, coronary artery disease, HDL-C, creatinine, troponin, and CRP), FIB-4 and CRP emerged as the strongest independent predictors of long-term mortality.

CONCLUSIONS
Elevated FIB-4 score at admission is an independent predictor of 3-year mortality in patients with COVID-19 pneumonia. Liver fibrosis biomarkers may offer an accessible tool for long-term risk stratification in the post-COVID era. Prospective studies are needed to further clarify interactions between liver fibrosis, systemic inflammation, and chronic post-infectious outcomes.

Table 1. Logistic regression analysis for long term mortality in COVID-19

	Sig.	OR	95% C.I.for OR Lower	Upper
Age	,112	1,038	,991	1,087
FIB-4	,032	1,568	1,039	2,365
Hs-CRP	,015	1,017	1,003	1,031
HDL-C	,825	1,006	,955	1,060
Hs-troponin	,607	1,006	,983	1,030
Creatine	,172	3,558	,576	21,985
HTN	,512	,582	,115	2,933
CAD	,557	,607	,114	3,217
DM	,325	2,233	,451	11,053
Constant	,007	,005		

ABSTRACT N°16

TITLE: PROGNOSTIC VALUE OF SERUM AMMONIA FOR SHORT-TERM MORTALITY IN CIRRHOSIS: A SYSTEMATIC REVIEW

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KEYWORDS
AMMONIA, CIRRHOSIS, MORTALITY, PROGNOSIS

OBJECTIVES
The role of serum ammonia in assessing the progression of hepatic encephalopathy (HE) in liver disease patients has been a subject of ongoing debate. However, its prognostic utility for short-term mortality in adult cirrhotic patients remains inconclusive. Given that acute-on-chronic liver failure (ACLF), intensive care unit (ICU) admissions, and outpatient decompensation all occur within the context of cirrhosis, this review aimed to evaluate whether baseline or serial serum ammonia levels predict short-term mortality in cirrhotic adults across diverse clinical settings.

METHODS
A systematic search for studies published between January 2020 and December 2024 was conducted. Eligible studies included adults with confirmed cirrhosis (including those meeting criteria for ACLF), reported serum ammonia measurements (arterial or venous), and documented short-term mortality outcomes such as 28-day, 30-day, or in-hospital mortality. Seven studies met the inclusion criteria for qualitative synthesis. Effect sizes were extracted as hazard ratios (HR) or odds ratios (OR). Studies with complete confidence intervals (CI) were included in a pooled random-effects meta-analysis. Heterogeneity was assessed using the I^2 statistic.

RESULTS
Seven studies (n=3,716 cirrhotic patients) were included in the analysis. Across all individual studies, elevated serum ammonia levels consistently correlated with increased short-term mortality. A pooled analysis of three studies with complete HR data indicated a trend toward increased mortality risk with rising ammonia levels (pooled HR 1.08; 95% CI 0.99–1.18; I^2=89%). Two studies with OR data demonstrated a directionally similar association (pooled OR 2.88; 95% CI 0.42–19.88; I^2=97%). The precision of these findings was limited by variations in study design, ammonia measurement methodologies, and patient populations (ACLF, ICU, and outpatient cirrhosis). Two additional high-quality ACLF studies reported independent associations between ammonia and 28-day mortality but were excluded from quantitative pooling due to missing CI.

CONCLUSIONS
Across ACLF, ICU, and outpatient cohorts, all comprising adults with cirrhosis, higher serum ammonia levels were associated with poorer short-term outcomes. While heterogeneity and incomplete reporting constrained statistical precision, the consistent direction of the study suggests that serum ammonia may serve as a clinically significant prognostic biomarker for short-term mortality in cirrhosis. Harmonized ammonia measurement techniques and standardized reporting are essential to enhance prognostic modeling in this area.

ABSTRACT N°17 1/2

TITLE: LSM BY HEPATOSCOPE® 2DTE IS INDEPENDENT OF BMI AND COMPARES FAVORABLY TO FIBROSCAN® VCTE

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KEYWORDS
Hepatoscope, Fibroscan, Transient-Elastography, LSM, MASLD

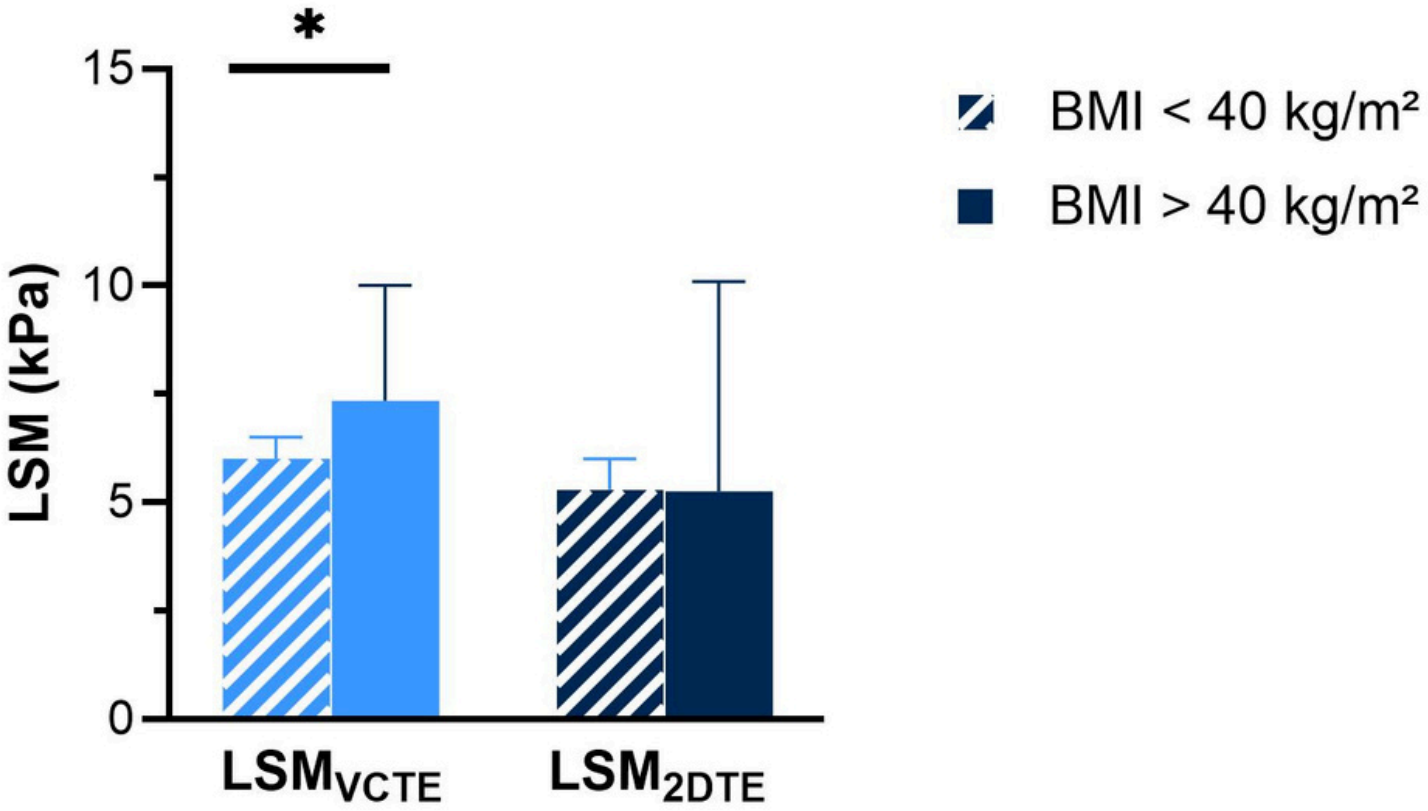
OBJECTIVES
Accurate liver stiffness measurement (LSM) is essential for prognostication of metabolic-dysfunction associated liver disease (MASLD). FibroScan® VCTE™ is commonly used but has limited accuracy in populations with severe obesity (BMI>40kg/m²). Additional imaging ultrasound (US) is often required to find the best location for LSM, extending exam time and cost. Routine practice could benefit from a transient elastography (TE) system with image guidance. This prospective study aimed to evaluate the feasibility of using Hepatoscope®, an ultraportable device combining US with 2D-TE, in patients with MASLD at differing BMI, and to compare LSM measured with Hepatoscope and FibroScan.

METHODS
From August to December 2024, 189 patients with MASLD scheduled for LSMVCTE at Mercy Medical Center underwent a second LSM with Hepatoscope' 2DTE (v2.1.5). Thirteen patients were excluded by high alcohol intake or due to missing data. LSMVCTE and LSM2DTE were compared. Impact of body mass index (BMI) on both LSMVCTE and LSM2DTE was assessed, as well as their diagnostic performance to identify patients with advanced fibrosis with available liver biopsies or MRE (n=46).

RESULTS
176 patients were included. Baseline demographics included median age 59.0 [48.0 - 67.0], gender (51.1% female), type 2 diabetes (55.7%), and BMI 30.6 [26.9 - 35.1], with 20 (11.4%) with severe obesity. Distributions of LSM2DTE and LSMVCTE were not different (5.4 kPa [4.4 - 7.7] and 6.2 kPa [4.6 - 9.1], respectively). They both strongly correlated (r = 0.63***) with no bias. LSMVCTE had a weak but significant trend to increase with BMI (r = 0.2633***, 95%CI: 0.1149 - 0.4003) and patients with severe obesity had higher LSMVCTE (p = 0.011). This was not observed with Hepatoscope where LSM2DTE were independent of BMI. In patients with ground truth, LSM2DTE and LSMVCTE had similar good performances (AUROC = 0.82****) to identify patients with advanced (F3) fibrosis.

CONCLUSIONS
Our study demonstrated that Hepatoscope, an FDA-cleared device which combines 2DTE and US imaging, can be used for accurate LSM. LSM2DTE were independent of BMI, potentially addressing known limitations in patients with severe obesity. Hepatoscope may offer additional advantages over other LSM devices, including CPT codes related to its imaging capability.

ABSTRACT N°17 2/2



ABSTRACT N°18 1/2

TITLE: SEMAGLUTIDE-INDUCED WEIGHT LOSS PREDICTS HEPATIC IMPROVEMENTS IN PATIENTS WITH T2DM AND MASLD

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KEYWORDS
SEMAGLUTIDE; T2DM; MASLD; FibroScan

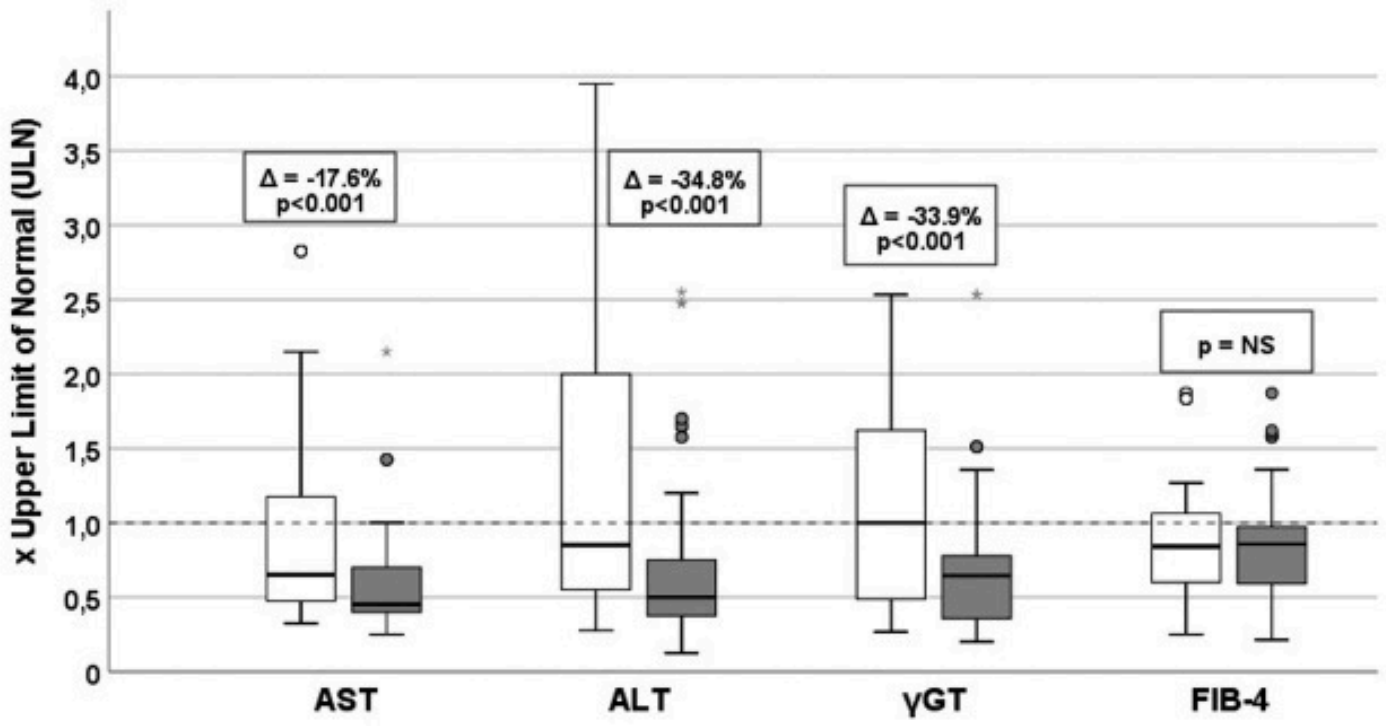
OBJECTIVES
Semaglutide is currently being investigated for its effectiveness in metabolic dysfunction-associated steatotic liver disease (MASLD), irrespective of type 2 diabetes mellitus (T2DM) presence, even though its action on hepatic fibrosis is still debated. Aim of this study was to examine the effect of semaglutide on hepatic parameters in patients with both T2DM and MASLD in real-world clinical practice, and to further assess the significance of weight loss during treatment.

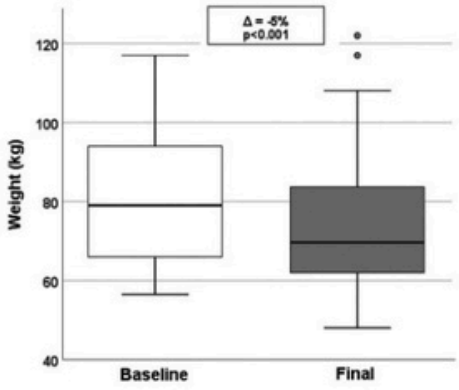
METHODS
In consecutive patients with T2DM and MASLD, hepatic biochemistry and Fibrosis-4 (FIB-4) score were recorded. In participants with high FIB-4, elastographic measurements of Liver Stiffness (LSM) and Controlled Attenuation Parameter (CAP) were acquired with FibroScan®, before and after treatment with semaglutide. For within group comparisons, Wilcoxon signed rank test for related samples was performed, while the role of weight loss was further investigated with multiple regression analysis.

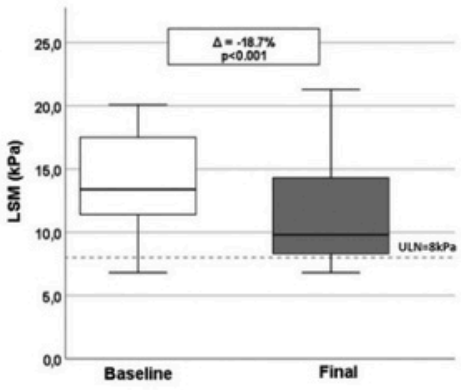
RESULTS
A total of 111 patients were included: 31 males (27.9%), mean age 56.4±9.7 years-old, BMI 32.7±6.3 kg/m2, median HbA1c 5.8% (IQR 5.6-6.2). Semaglutide (0.5-2.4mg/week) was administered subcutaneously for a median of 12 months (IQR 6.6-17). Thirty-three patients (29.7%) had AST and/or ALT above normal, and 35 (31.5%) high FIB-4 score. Apart from an overall drop in HbA1c of 5.6% (IQR 1.6-8.6) and weight loss of 10.0% (IQR 3.2-19.6), statistical significant reductions were recorded in all liver enzymes and elastographic parameters ($p<0.001$). [FIGURES 1&2] In multiple regression analysis, weight loss was found to independently predict improvements in aminotransferases and measured CAP ($p<0.001$), irrespective of treatment duration and baseline FIB-4.

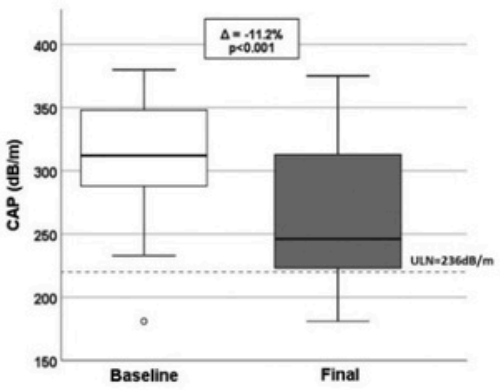
CONCLUSIONS
In this cohort of T2DM/MASLD patients with baseline optimal glycemic control, semaglutide-induced weight loss led to significant improvements of all hepatic parameters (biochemistry, liver stiffness and steatosis assessed with CAP), even in MASLD patients with baseline liver enzymes within normal. This study supports the advantages of semaglutide administration in concomitant T2DM and MASLD.

ABSTRACT N°18 2/2









ABSTRACT N°19 1/2

TITLE: PREDICTORS OF LIVER FIBROSIS INDICES IN CARDIAC PATIENTS

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KEYWORDS
FIB4, LIVER FIBROSIS, CARDIAC PATIENTS, PARAMETERS

OBJECTIVES
Metabolic dysfunction–associated steatotic liver disease (MASLD) is a major global health issue and often remains asymptomatic, making early detection difficult. MASLD and cardiovascular disease (CVD) share common pathophysiological pathways, and affected patients face increased risks of liver fibrosis, cirrhosis, adverse cardiovascular events (CV), and heart failure (HF). The fibrosis 4 (FIB-4) and aspartate aminotransferase (AST)/platelet ratio index (APRI index) are liver fibrosis biomarkers.
We aim to calculate the FIB4 and APRI indices patients who are admitted to the cardiology service with CVD and/or HF over the last 2 years to show relationship between liver fibrosis and cardiac diseases.

METHODS
This cross-sectional study includes patients admitted between 10 March 2024 and 10 March 2025, with records of 559 consecutive cases reviewed for demographic, clinical, and laboratory data. FIB-4 was calculated as age (years) X AST (unit/liter) / (platelet (109/L) X √alanine transaminase (unit / liter)) and APRI as (AST/top normal AST) x (100/platelet count). The prevalence of elevated scores (FIB-4 >3.25; APRI >0.5) was determined, and logistic regression was used to identify predictors of increased fibrosis indices in cardiac patients.

RESULTS
The study included 559 patients: 99 heart failure, 358 acute coronary syndrome, and 102 arrhythmia cases. Increased FIB-4 and APRI indices are extremely common among cardiac patients. In the STEMI group, a high FIB-4 score (>3.25) was observed in 51.5% of patients, and a high APRI score in 65.3%, indicating a notably increased fibrosis burden. In contrast, the prevalence of high FIB-4 index was lower and relatively similar across the other diagnostic groups: NSTEMI (21.4%), HF (22.2%), and arrhythmia (24.5%). Elevated APRI scores were observed in 29.6% of NSTEMI, 28.3% of HF, and 37.3% of arrhythmia patients.

CONCLUSIONS
The study results indicate that liver fibrosis indices are frequently elevated in cardiac patients, prevalences of high FIB-4 and APRI nearly double in STEMI. Because liver fibrosis and cardiovascular disease share mechanisms such as inflammation, oxidative stress, and endothelial dysfunction, it remains unclear whether these elevations reflect myocardial infarction–related tissue injury or pre-existing hepatic fibrosis. Further researches are required to clarify the relationship between liver fibrosis and cardiovascular diseases.

ABSTRACT N°19 2/2

	NSTEMI	Arrhythmia	STEMI	HEART FAILURE	P
ALT	24(27)	30(52)	37(39)	27(31)	<0,001
AST	39(40)	37(45)	94(184)	37(40)	<0,001
PLT	290(106)	271(84)	291(145)	300(192)	0,289
AGE	68(22)	62(23)	62(19)	76(20)	<0,001
FIB-4	1,8(1,9)	1,6(2,1)	3,4(5,05)	1,8(1,8)	<0,001
APRI	0,4(0,4)	0,4(0,4)	0,8(1,8)	0,3(0,5)	<0,001

Table 2

ALT:Alanin transaminase(Unit/Liter), AST: Aspartate transferase(Unit/Liter), PLT: Platelet ($10^3/\mu L$), Age (years) , FIB-4: Fibrosis 4 (%), APRI: Aspartate aminotransferase (AST)/Platelet ratio index (%) NSTEMI: Non-ST elevated Myocardial Infarction, STEMI:ST elevated Myocardial Infarction
Variables (ALT, AST, PLT, AGE, FIB-4, APRI) are represented by median (interquartile range).

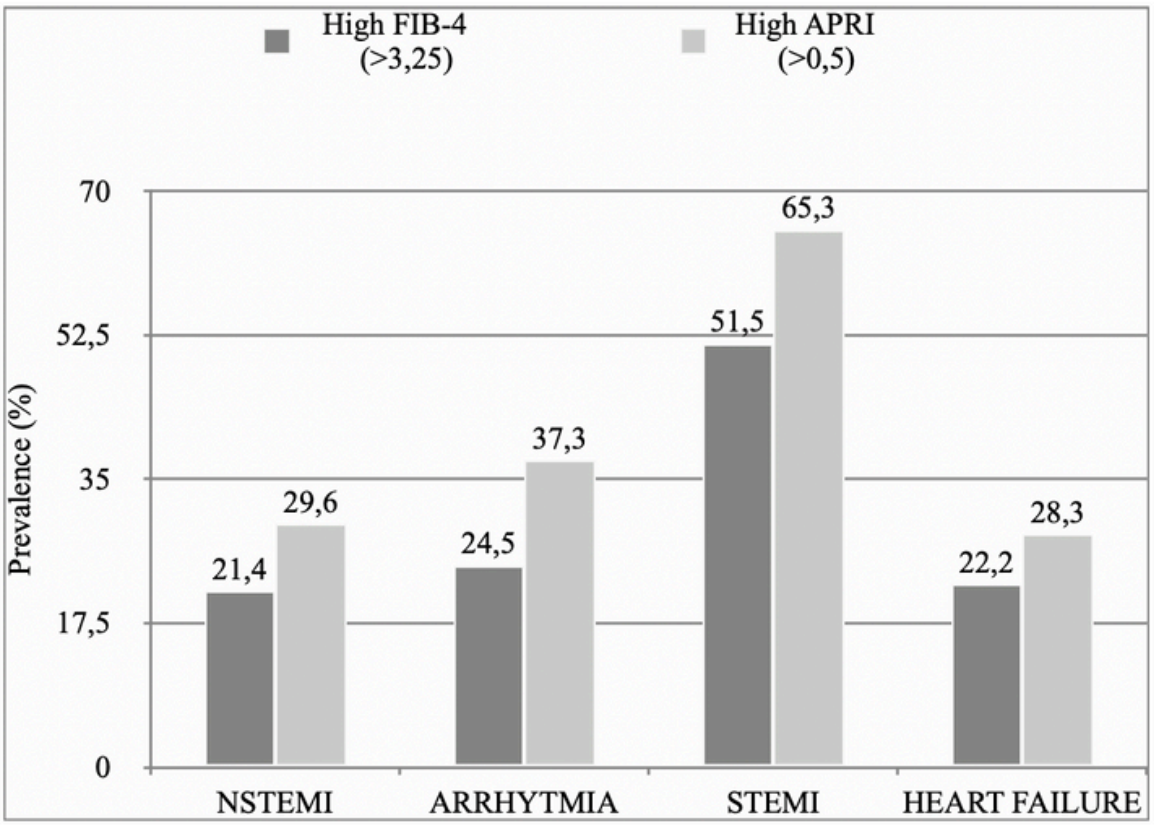


Table 1
NSTEMI: Non-ST elevated Myocardial Infarction, STEMI:ST elevated Myocardial Infarction.
The percentages represent the prevalence of elevated FIB-4 and APRI scores among patients diagnosed with NSTEMI, arrhythmias, STEMI, and heart failure.

ABSTRACT N°20 1/2

TITLE: CLINICAL DETERMINANTS OF LIVER FIBROSIS IN PATIENTS WITH CARDIOVASCULAR RISK IN TURKEY

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KEYWORDS
Capsaicin, Liver Fibrosis, Cardiovascular Disease

OBJECTIVES
Liver fibrosis and cardiovascular disease (CVD) are complex phenotypes influenced by dietary, environmental, genetic, and regional factors.

METHODS
This cross-sectional study compared liver fibrosis indices (APRI, FIB-4, and NAFLD) in outpatient clinics for CVD prevention in Besni (Adıyaman, Southeastern Turkey) and Istanbul, Turkey. Demographic data, anthropometric measurements, medical history, and routine laboratory parameters were recorded. Liver function tests, platelet counts, and lipid profiles were obtained from routine analyses. Hepatic steatosis was graded on a standardized 0–3 scale using ultrasonography. Dietary habits were assessed using a structured questionnaire. Liver fibrosis indices were calculated using established formulas.

RESULTS
The study included 111 patients from Besni and 25 patients from Istanbul (mean age: 47 ± 10 years; 60% male). Age and body mass index were similar between the regions. Dieatary habits displayed significant regional differences.in red pepper (capsaicin) comsumption. Patients living in Southeast consumed more capsaicin-containing spicy foods than those from Istanbul (median [IQR]: 5 [9] vs. 0.7 [0.7] g/day, $p < 0.001$). Patients in Besni had lower HDL-C and higher triglyceride levels. The Triglyceride-Glucose (TyG) index as a marker of insulin resistance (IR) was significantly higher in Besni compared to Istanbul (9.3 ± 0.7 vs 8.5 ± 0.6, $p<0.001$). Based on TyG index, IR was present in 78 and 42 % of patients in Besni and Istanbul, respectively ($p < 0.001$). Grade 2 or 3 hepatic steatosis was observed in 46 and % of patients in Besni and Istanbul, respectively ($p=0.86$). Liver fibrosis indices showed regional differences, with lower APRI and higher NAFLD fibrosis scores in Besni. Intermediate NAFLD fibrosis scores were present in 22.4% of patients and were associated with older age, higher creatinine levels, lower iron-binding capacity (IBC), and higher mean corpuscular volume. In logistic regression analysis, IBC was the strongest variable associated with increased NAFLD fibrosis score.

CONCLUSIONS
Study indicates that hepatic steatosis and IR are extremely common in Southeastern Turkey. In the current obesity endemic, surrogate parameters are needed to identify patients at increased cardiovascular risk. Further studies are needed to elucidate the regional differences in the surrogate biomarkers of CVD and liver fibrosis.

ABSTRACT N°20 2/2

Table 1. Logistic regression analysis for intermediate NAFLD score (> -1,455) in patients with cardiovascular risk.

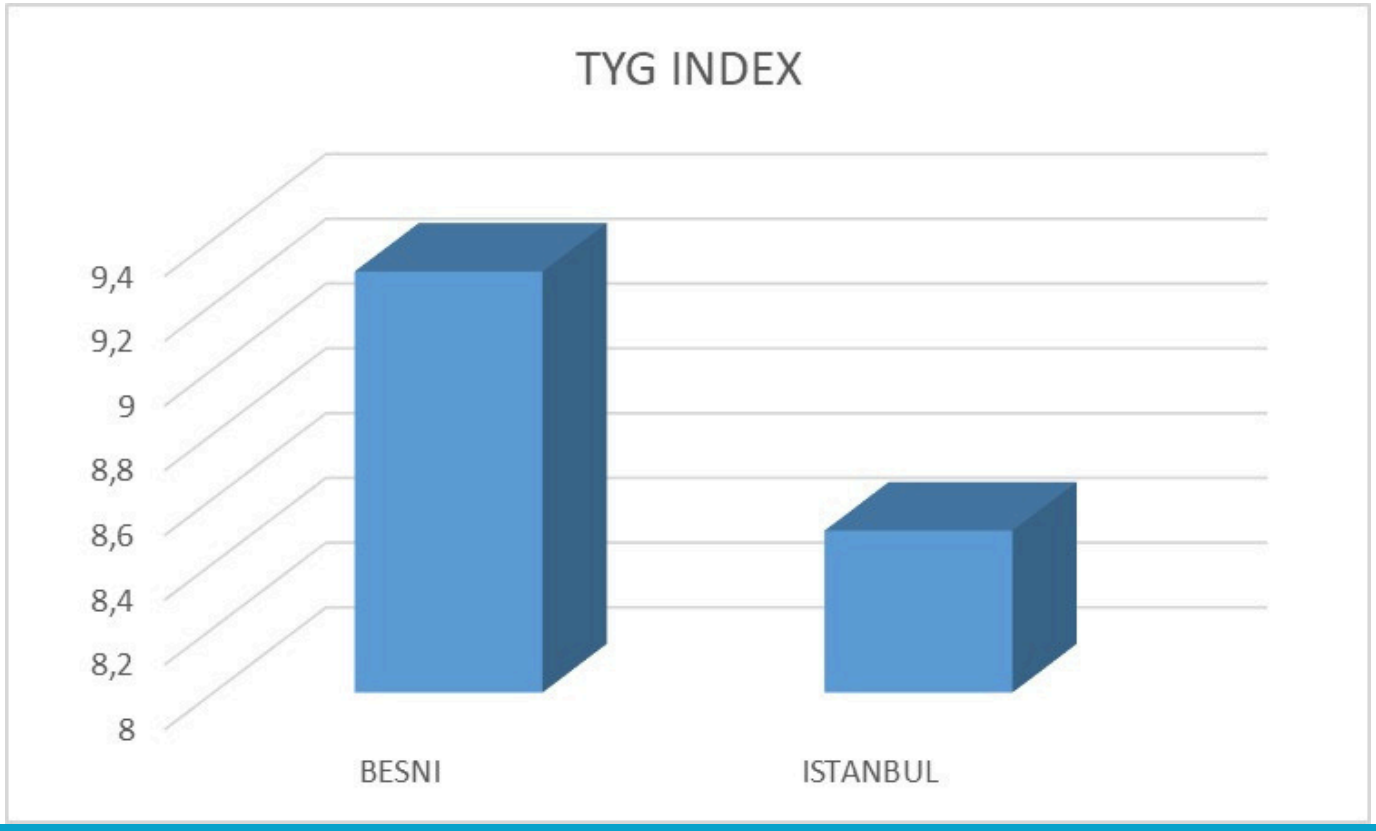
	Sig.	OR	95% CI.for OR Lower	Upper
Age	,098	1,181	,970	1,438
Creatine	,559	,031	,000	3545,351
MCV	,933	1,012	,758	1,353
Iron BC	,020	,972	,949	,995
Urea	,595	1,077	,819	1,418
Tot. Chol.	,676	1,005	,983	1,027
Constant	,728	,003		

OR Odds Ratio

MCV mean corpuscular volume

Iron BC Iron binding capacity

Tot chol total cholesterol



ABSTRACT N°21

TITLE: TRAJECTORY OF HEPATOCELLULAR CARCINOMA (HCC) IN KERALA, S INDIA OVER THE PAST FOUR DECADES

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KEYWORDS
Hepatocellular cancer Kerala Trajectory

OBJECTIVES
Hepatocellular carcinoma (HCC) presents at an advanced stage and has poor prognosis and we describe the profile of HCC in two tertiary care centers in Trivandrum, Kerala.

METHODS
Three cohorts of HCC: (Cohort 1 1980-1981 and Cohort 2 : 2001-2003 at Medical College, Trivandrum Cohort 3 May 2006 to November 2025at SGMC) were evaluated;

RESULTS
Cohort 1: 49 subjects (male 38 Female 11) with mean age 43.8 and 10.2% were less than 20 years. Laparoscopy indicated cirrhosis and HCC and liver biopsy showed trabecular HCC in 37 and undifferentiated in 11. 15 patients received Adriamycin and 16 received Adriamycin, 5 Fluorouracil. and Mitomycin C . 18 patients had irradiation. 31 patients expired within 6 months and the rest by 12 months.

Cohort 2 : 107 cases (91 males and 16 females),50.4% belonging to the age group 40-59 years .75.7% had positive cytology and 51 (47.7%) had elevated AFP… 44(41.1%) had HBV ; (5.6%) were Anti HCV +ve and 24 were alcoholics. Solitary lesion in 47 patients. The portal vein was involved in 49. Distant metastasis was observed in 3 patients; 4 underwent hepatic resection.

Cohort 3 : 654 subjects ;31-39 years (6%) ; 40-59 Years 54 %; mean age : 44.6 . AFP was > 400 ng/ml in 41% .Etiology was alcohol (59 %) NAFLD in 29% and rest were HBV or HCV. Solitary mass (281); Multicenter (202) & Diffuse pattern (121). Main portal vein and or branches had thrombosis (40%)…Vascular invasion, distant metastasis in 9 patients .Trans arterial chemo embolization was done in 65 patients and 14 had radiofrequency ablation. Sorafenib or Lenvatinib was administered to 72 patients and immunotherapy for 2 patients . Median survival was 3.2 months.

CONCLUSIONS
HCC has poor survival and high AFP and vascular involvement had poor prognosis. Early detection can improve survival

ABSTRACT N°22 1/2

TITLE: RISK OF PANCREATIC DISEASE IN FAMILIES WITH MASLD: A POPULATION-BASED MULTIGENERATIONAL COHORT STUDY

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KEYWORDS
MASLD, familial, pancreatitis, pancreatic cancer

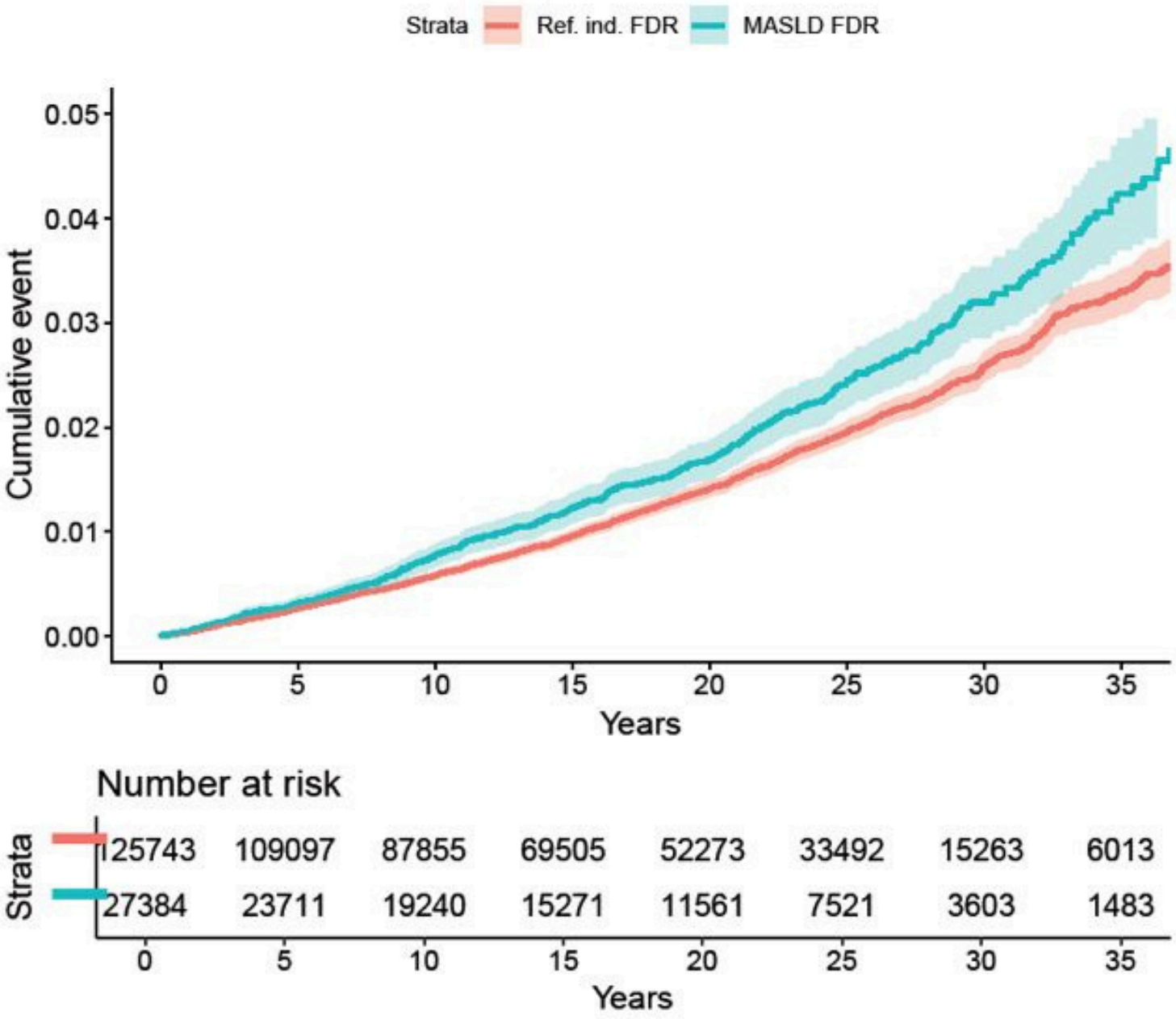
OBJECTIVES
Recent data suggest that Metabolic Dysfunction-associated steatotic liver disease (MASLD) is associated with higher rates of non-biliary acute and chronic pancreatitis, as well as pancreatic cancer. However, whether family members of individuals with MASLD also share an increased risk of pancreatic disease is unknown.

METHODS
This nationwide multigenerational cohort study involved family members of all Swedish adults diagnosed with biopsy-proven MASLD (1969−2017), and matched general population comparators without earlier pancreatic disease at baseline. Using the Swedish Multigeneration Register, we identified 27,384 MASLD first-degree relatives (FDRs: parents, siblings, offspring) and 9,848 MASLD spouses as well as 197,087 comparator FDRs and 34,112 comparator spouses. The primary endpoint of pancreatic disease was a composite of acute non-biliary pancreatitis, chronic pancreatitis, and pancreatic cancer up until 31 December 2023. Using Cox proportional hazards models, we calculated multivariable adjusted hazard ratios (aHRs) and confidence intervals (CIs).

RESULTS
After a median follow-up of 16.9 years, there were 476 incident pancreatic events among MASLD FDRs (incidence rate [IR] 99/100,000 person years [PY]) compared to 1,692 among comparator FDRs (IR: 77/100,000PY), yielding an aHR of 1.34 (95%CI=1.20−1.49) or 1 extra case of pancreatic disease in 450 MASLD FDRs followed-up for ten years. MASLD FDRs had higher hazards of acute non-biliary pancreatitis (aHR 1.18, 95%CI=1.00-1.40), and chronic pancreatitis (aHR 1.72, 95%CI=1.38-2.15). Furthermore, MASLD FDRs had higher hazards of pancreatic cancer (aHR 1.37, 95%CI=1.17-1.61) and a higher pancreas-related mortality (aHR 1.43, 95%CI=1.19-1.72). MASLD spouses were also at an increased risk of pancreatic disease (117 vs. 90/100,000 PY; aHR 1.26 [95% CI=1.06-1.50]).

CONCLUSIONS
Family members of individuals with biopsy-proven MASLD have a slightly higher risk of pancreatic disease including acute non-biliary pancreatitis, chronic pancreatitis, and pancreatic cancer. These observations might be related to shared lifestyle factors, as hazards were comparable for FDRs and spouses. Of note, absolute risks were low and our findings argue against systematic screening of FDRs and spouses for pancreatic disease.

ABSTRACT N°22 2/2



ABSTRACT N°23

TITLE: PREVALENCE AND OUTCOME OF ACUTE ON CHRONIC LIVER FAILURE IN A CIRRHOSIS: A COHORT STUDY

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KEYWORDS
Chronic liver disease ACLF Mortality

OBJECTIVES
Acute-on-chronic liver failure (ACLF) is a unique clinical entity characterized by acute decompensation of chronic liver disease (CLD), associated organ failures, and high short-term mortality. Variations in clinical presentation and prognosis are influenced by precipitating events and severity of organ dysfunction, assessed by scoring systems such as AARC (Asian Pacific Association for the Study of the Liver [APASL])/CLIF-C (European Association for the Study of the Liver [EASL]), and Kyoto KOFS. We evaluated the prevalence, triggering factors , pattern of organ failure , scoring performance, and outcomes of ACLF in CLD patients.

METHODS
We have a chronic liver disease registry in the Department of Gastroenterology at Sree Gokulam Medical College, Trivandrum . tertiary care center in South Kerala, India. Adult CLD patients aged 18 and more in the registry from January 2014 to November 2025 were included. Data were extracted from the medical records, including demographics, etiology, decompensation type, organ failure scores (AARC, CLIF-C ACLF, Kyoto KOFS), and outcomes.

RESULTS
Of 2847 CLD patients (mean age: 59.7), 169(5.93%) were diagnosed with ACLF. Alcohol-related liver disease was the leading etiology. Common precipitants included sepsis, alcoholic hepatitis, GI bleeding, and drug-induced liver injury. Renal failure was the most frequent organ failure, followed by hepatic failure and coagulopathy. ICU admission was required in 154 ACLF patients, with 38 needing mechanical ventilation and 17 required renal replacement therapy.
Outcome :103 deaths, 64 recoveries, and 2 post-transplant deaths, Higher severity grades on AARC, CLIF-C, and Kyoto KOFS scores were associated with worse outcomes, with Kyoto KOFS providing detailed organ-specific insights.

CONCLUSIONS
This large cohort of CLD highlights the significant burden of ACLF among CLD patients. Renal dysfunction was the most common and prognostically important organ failure. Combining scoring systems enhances early risk stratification and may guide individualized interventions. The high ICU utilization and mortality underscore the need for early identification and comprehensive management strategies.

ABSTRACT N°24

TITLE: CLINICAL CHARACTERISTICS AND SHORT-TERM MORTALITY OF PATIENTS WITH CIRRHOSIS DUE TO ALCOHOL-RELATED LIVER DISEASE

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KEYWORDS

ALCOHOL-RELATED LIVER DISEASE, MORTALITY, CIRRHOSIS

OBJECTIVES

Alcohol-related liver disease (ALD) is considered one of the most prevalent liver diseases worldwide, which occurs because of chronic and hazardous alcohol use, commonly together with alcohol dependence syndrome. During the previous years, both increased prevalence of ALD and mortality due to ALD have been observed.

METHODS

The aim of this study was to evaluate clinical characteristics and outcome of patients with cirrhosis due to ALD hospitalized because of acute decompensation. For that purpose a cohort study was performed, which included patients treated in semi-intesive and intensive care unit of Clinic for gastroenterology and hepatology, University Clinical Center of Serbia, from November 2022 to April 2023. Data was collected both retrospectively and prospectively from patients’ medical histories and included information regarding clinical presentation and course, short-term and overall outcome, laboratory parameters on admission and clinical scores (Chronic Liver Failure Consortium Acute Decompensation (CLIF-C AD) and Model for End-Stage Liver Disease (MELD)).

RESULTS

A total of 117 patients were included, with mean age of 56.17±10.59 years (males: n=106, 90.6%). At the time of admission, 88.03% (n=103) of patients were actively consuming alcohol and 24.7% (n=29) developed abstinence syndrome during the hospitalization. Lethal outcome within 28 days was noted in more than one third of patients (n=41, 35%). Mortality rates were even higher in the follow-up period, with overall mortality of 43.59% (n=51). Cardiovascular events (fatal arrhythmias, heart failure) were the most commonly reported cause of death in this group of patients (n=20, 39.2%). CLIF-C AD and MELD were both significantly higher in patients who died within 28 days (60.73 vs. 54.95; 23.24 vs.16.97; respectively, $p<0.05$). By area under the receiver operating characteristic curve analyses, there was no statistically significant difference in predictive power of MELD and CLIF C AD in patients with acute decompensation ($p>0.05$). Active alcohol consumption and abstinence syndrome frequency did not differ between short-term survivors and non-survivors ($p>0.05$).

CONCLUSIONS

Cirrhosis due to ALD is mostly diagnosed in men, who are active drinkers. Mortality rates are high and cardiovascular events were reported as the most common extra-hepatic cause of death. Clinical scores are valuable tool for prognosis assessment.

ABSTRACT N°25

TITLE: TIME RESTRICTED EATING MAY REDUCE LIVER FIBROSIS IN METABOLIC DYSFUNCTION ASSOCIATED STEATOTIC LIVER DISEASE

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KEYWORDS
Time restricted eating; Liver fibrosis

OBJECTIVES
Metabolic dysfunction-associated steatotic liver disease (MASLD) is the most common chronic liver disease worldwide. Weight loss and control of metabolic risk factors remain cornerstone of management. Time restricted eating (TRE) especially with 16:8 is commonly practised, and is effective, for weight loss. It is a form of intermittent fasting when food is consumed ad libitum for 8 hours a day with avoidance of food and calorie-containing beverage for the remaining 16 hours thereafter. It is well tolerated and is achievable by either skipping breakfast or dinner. Liver fibrosis is a prognostic indicator for progression of MASLD. Regression of liver fibrosis is an important endpoint for MASLD treatment as it prevents liver related complications. We aim to evaluate whether TRE 16:8 regresses liver fibrosis by performing a systematic review.

METHODS
Literature search of PubMed, EMBASE and Google Scholar was performed using combination of keywords (“time restricted eating” OR “intermittent fasting”), (“MASLD” OR “fatty liver”) AND (“liver fibrosis” OR “liver stiffness”), covering all records from their inception until 15 December 2025. All randomised controlled trials (RCT) were summarised and analysed.

RESULTS
Eight RCTs with a total of 933 patients were included in this study. Sample size per RCT varied from 32 to 337 patients. TRE 16:8 intervention was applied over a study period of 8 weeks to 12 months, with six RCTs having an intervention period of 3 months or less. Most of the RCTs were conducted in Asia. This review suggests that TRE 16:8 may be beneficial in the reduction of liver fibrosis, although some of the effect may also be observed in controls on low-calorie diet.

CONCLUSIONS
It appears that TRE 16:8 may be an attractive treatment modality for MASLD due to its potential additional effect on liver fibrosis reduction. However, further high-quality studies with longer dietary intervention and follow-up are required to confirm this observation before adopting such approach.