

Table: Key demographics, Time to Treatment initiation, and SVR rate of patients by region and country

	Overall LATAM	Mexico**	Brazil	Colombia
# patients	890	454	293	143
Median age, y [IQR]	54.5 [43.2; 63.5]	50.9 [40.9; 59.5]	58.6 [47.8; 65.9]	61.3 [40.3; 68.9]
Male, %	50.9	52.9	47.1	52.4
≥50 y, % (male and female)	61.9	53.7	72.2	67.4
≥50 y male, %	30.5	29.7	35.4	22.5
≥50 y female, %	31.4	24.0	36.8	45.0
Genotype 3, %	14.4	11.0	25.3	2.8
Cirrhosis stage, %	33.9	48.5	14.0	28.7
# patients	837	451	291	95
Time to Treatment ≤ 1 month, %	27.5	10.6	57.1	17.9
# patients	788	440	237	111
Overall SVR, % *	99.6	99.5	100.0	99.1
SVR in GT3 patients, %	98.2	95.7	100.0	100.0
SVR in cirrhotic patients, %	99.6	99.5	100.0	100.0
SVR in GT3 & cirrhotic patients, %	97.4	96.0	100.0	100.0

*In effectiveness population, excludes patients who did not have a valid SVR status because of non-virological reasons or unknown reasons; ** Two sites

Key outcomes for LATAM in SVR10K study

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P-12 METHYL GROUP DONOR SUPPLEMENTATION IN A MetALD MODEL: REGULATION OF GUT MICROBIOTA AND METABOLIC PARAMETERS

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Conflict of interest: No

Introduction and Objectives: Patients who meet both MASLD (Metabolic dysfunction-associated steatotic liver disease) and alcohol-related fatty liver disease (ALD) criteria are categorized as having Met-ALD (Metabolic and alcohol-related liver disease) and its damage is characterized by metabolic dysfunction, gut dysbiosis and liver inflammation, resulting in steatosis and fibrosis. Methyl group donor supplementation in MASLD demonstrated metabolic benefits; we expect to corroborate those effects in MetALD and look for microbiota changes induced by methyl availability.

Patients / Materials and Methods: Twenty-four C57BL/6J male mice (25 ± 2g) were randomly assigned to 1) Control group (ND n=8); 2) MetALD (20% ethanol in water+45% fat diet); 3) Met-ALD + MetMix (MetALD + methyl donors: methionine, betaine, zinc sulfate, choline, B9, B6 and B12). Each group maintained their respective diet/supplementation for 20 weeks. Liver, epididymal fat and body weight were weighted at sacrifice and liver enzymes, adipokines and lipid profile were measured on serum. Histopathological evaluation was performed on liver, adipose and colon tissues. Gene expression of IL6 and TNF-α was analyzed, while 16S rRNA gene sequencing in fecal DNA assessed gut microbiota.

Results and Discussion: Methyl donor supplementation decreased (p<0.05) body and epididymal fat weight, and reduced cholesterol, HDL, and LDL serum levels. A reduction (n.s.) in AST, ALT, TG, VLDL, insulin, leptin, glucagon, and resistin, and the mRNA levels of IL-6 and TNF-α were also observed. Hepatic steatosis and adipocyte area revealed a significant decrease (p<0.05) in MetALD + Met-Mix group. Intestinal crypts tended to be restored in length, similar to the control group. Microbiota Beta diversity was comparable between groups, while alpha diversity and Firmicutes/Bacteroidetes

ratio showed a trend towards increase due to Firmicutes enrichment following supplementation.

Conclusions: Methyl donor supplementation improved body weight and lipid profile and reduced liver steatosis and adipocyte area, boosting the abundance and diversity of gut microbiota.

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P-13 EVALUATION OF UNDIAGNOSED ALCOHOLIC LIVER DISEASE IN PATIENTS WITH METABOLIC DYSFUNCTION-ASSOCIATED FATTY LIVER DISEASE USING THE ANI SCORE

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Conflict of interest: No

Introduction and Objectives: The 2024 EASL-EASD-EASO guidelines on Steatotic Liver Disease emphasize the distinction between Metabolic Dysfunction-Associated Steatotic Liver Disease (MAFLD) and the subcategories with significant alcohol consumption: Alcoholic Liver Disease (ALD) and Metabolic ALD (MetALD). To this aim, a systematic record of alcohol consumption and/or validated biomarkers is recommended.

To evaluate the likelihood of associated but unrecognized alcohol-related liver disease (MetALD/ALD) in patients managed for MAFLD.

Patients / Materials and Methods: A single-center retrospective study that analyzes the probability of MetALD/ALD using the ALD/NAFLD (ANI) score in patients diagnosed with MAFLD during May/June 2024. MAFLD was defined by the presence of hepatic steatosis with alcohol intake <20/30 g/day (iwomen/men), at least one cardiovascular risk factor, and no other discernible cause. Patients with suspected advanced chronic liver disease were excluded. A probability of MetALD/ALD was considered if ANI>0 (indicative of a probability >50%). Sociodemographic variables, alcohol consumption, and hepatic fibrosis were recorded and compared between the ANI>0 and ANI<0 groups, with significance level set at p<0.05.

Results and Discussion: 85 patients were included, average age 61.8±9.7 years, 52.9% male. Alcohol consumption was documented in medical history for 63.3% (54/85) of patients, with 53.4% (29/54) reporting no consumption. Per ANI score, 21.2% (18/85) were identified as having a probability of MetALD/ALD (ANI>0), with half of these (9/18) showing a probability >90%. Alcohol intake (10-20/30 g/day) was significantly higher in the ANI>0 group, consisting solely of males. Hepatic fibrosis was more pronounced in this group (7.6±3.6 vs 5.9±1.7) but did not reach statistical significance.

Conclusions: The significant prevalence of unrecognized MetALD/ALD by ANI score suggests that alcohol consumption may be underreported in the ANI>0 group. Therefore, the inclusion of the ANI score as a biomarker for accurate differentiation MAFLD from MetALD/ALD appears to be beneficial.

	ANI>0 (n = 18)	ANI<0 (n=67)	Odds ratio	p-value
Age (years)	62.2±9.4	61.8±9.8		0.97
Male	100% (18/18)	40.3% (27/67)	Infinity	<0.001
Body mass index	28.7±3.9	31.7±4.6		0.02
Arterial hypertension	61.1% (11/18)	59.7% (40/67)	1.06	0.86
Diabetes mellitus	50% (9/18)	40.3% (27/67)	1.48	0.64
Dyslipidemia	38.9% (7/18)	53.7% (36/67)	0.55	0.39
Recorded alcohol consumption:				
0 g/week	72.2% (13/18)	61.2% (41/67)	1.71	0.51
10-20 g/week	23.1% (3/13)	63.4% (26/41)	0.17	0.01
30-60 g/week	15.4% (2/13)	12.2% (5/41)	1.31	0.54
10-20/30 g/day (female/male)	7.7% (1/13)	4.9% (2/41)	1.65	0.57
	53.9% (7/13)	19.5% (8/41)	4.85	0.03
Fibrosis (Kpa)	7.6±3.6	5.9±1.7		0.18
CAP	292.7±46.6	305.6±51.9		0.41
AST (U/L)	46.7±35.7	34.1±15.9		0.08
ALT (U/L)	38.9±33.6	39.1±23.9		0.39

Comparison of ANI>0 and ANI<0 groups.

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P-14 DETECTION OF CIRRHOSIS DUE TO ALPHA-1 ANTITRYPSIN DEFICIENCY IN ADULTS: PHENOTYPE STUDY IN COSTA RICA

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Conflict of interest: No

Introduction and Objectives: Alpha-1 antitrypsin (A1AT) levels are normal in up to 20% of liver diseases, and this protein elevates in inflammatory states, causing false negatives. This disease does not follow an autosomal recessive inheritance pattern, so the classical concept of homozygosity does not apply. Instead, two codominant alleles manifest as liver or lung disease. *Objectives:* To determine the phenotypes associated with A1AT-related liver disease in Costa Rica.

Patients / Materials and Methods: Phenotypes detected in patients with suspected A1AT deficiency from 2014 to July 2024 were analyzed. Phenotype identification was carried out using iso-electric focusing in agarose gel with immunofixation. The presence of liver disease was determined through clinical, laboratory, and imaging findings.

Results and Discussion: During the specified period, 371 phenotype studies were conducted on 187 women and 184 men. The identified phenotypes were: 15 ZZ probands, 22 MZ probands, 1 SZ proband, 7 MS probands, 1 SS proband, 1 null proband, 1 M/null proband, 31 MM probands, and 2 null/null probands. No Z/null proband was detected. Among 53 probands, there were: 10 ZZ, 13 MZ, 1 SZ, 4 MS, 1 SS, 1 null, and 23 MM. It was established that the risk of liver disease is slightly increased in MZ, increased in SZ, and very increased in ZZ. Cirrhosis was diagnosed in 19 probands: 7 ZZ, 7 M/null, 4 MZ, and 1 SZ.

Conclusions: A1AT quantification has a 20% false-negative rate, so phenotype testing is recommended when there is suspicion. In Costa Rica, the ZZ variant has the highest risk of liver disease, followed by SZ and MZ; the M/null phenotype was also detected as a cause of liver disease. Medical monitoring is necessary, and in doubtful cases, genotype testing should be performed.

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P- 15 GENETIC AND CLINICAL CHARACTERISTICS IN LEAN MASLD PATIENTS WITH AND WITHOUT CIRRHOSIS IN LATINOAMERICAN POPULATION

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Conflict of interest: No

Introduction and Objectives: Metabolic dysfunction associated esteatotic liver disease (MASLD) is the most common chronic liver disease worldwide. It is associated with metabolic conditions and can also occur in lean patients with a normal or low BMI. Polymorphisms in *PNPLA3*, *TM6SF2* and *MBOAT7* genes have been linked to an increased risk of developing hepatocellular carcinoma (HCC) and greater severity of fibrosis. This study aimed to assess clinical and genetics characteristics in Latin American lean MASLD patients with and without cirrhosis.

Patients / Materials and Methods: This descriptive cross-sectional study evaluated 148 patients from an international database of chronic liver disease patients (ESCALON), including Colombia, Brazil, Chile, Ecuador, Argentina and Perú. MASLD was identified in patients with a BMI≤ 25. Patients with alcohol-associated and viral -related liver diseases, as well as other liver conditions, were excluded. Clinical features and main MASLD-related pathogenic variants were evaluated in this population. We used BlueSky software to evaluate two sample t -test for cirrhotic vs no cirrhotic variables. The assessment included the median age range and average BMI.

Results and Discussion: A total of 102 patients (69%) were found to have cirrhosis, with 57% being female and a median age of 65,6 years.42% had HCC, 39% had diabetes mellitus(DM), 14% had dyslipidemia, and 28% had hypertension (HTN).Common genetic variants were evaluated in 60.8% (90/148) of the study population with the following distribution: *PNPLA3* (*rs738409*): 45,6% (GG), 43,3% (CG);*MBOAT7*(*rs641738*): 10%(TT), 43,3%(CT);*TM6SF2*(*rs58542926*): 0%(TT), 12,2%(CT) and 87,8%(CC);*HSD17B13*(*rs72613567*):1,2%(TT), 16,3%(AT);*GCKR*(*rs1260326*):33,3%(CC), 50%(CT).The characteristics by group and the differences found are shown in table 1

Conclusions: Cirrhotic patients were older, with higher rates of diabetes mellitus, hypertension, dyslipidemia and HCC. The *PNPLA3* GG variant was predominant in cirrhotics compared to non-cirrhotic patients, with no significant differences between groups in the other variants