(32%), including Klebsiella pneumoniae, Candida spp., Chlamydia sp., and Mycoplasma pneumoniae. Among patients with ACLF grade 3, 4 of 6 (67%) had fungal or polymicrobial infections. Malnutrition was observed in 9 patients (47%), including 3 of 6 (50%) with ACLF grade ≥2. It was more common in alcoholic cirrhosis (7 of 12; 58%) than in non-alcoholic cases (2 of 7; 29%). In-hospital mortality occurred in 6 patients (32%); 3 deaths (50%) were infection-related and 4 (67%) involved malnourished patients.

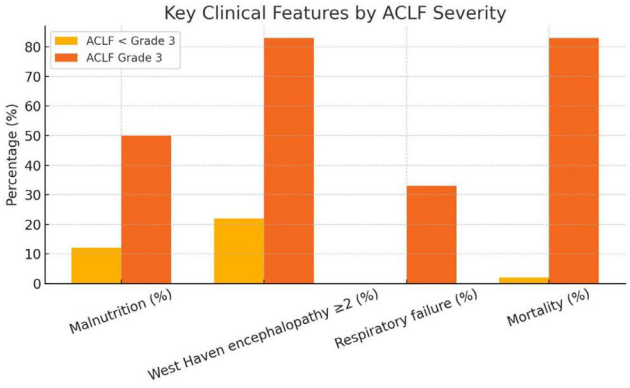
**Conclusions:** Malnutrition, alcohol-related cirrhosis, fungal or polymicrobial infections were associated with more severe ACLF and poorer outcomes. Early recognition of these risk factors may improve prognostication and guide therapy.

**Conflict of interest:** None

**Comparison of Clinical Characteristics by ACLF Grade**

| Variable | ACLF grade < 3 (n=13) | ACLF grade 3 (n=6) |
|---|---|---|
| Mean age (years) | 64.2 ± 11.7 | 61.7 ± 16.5 |
| Mean bilirubin (µmol/l) | 106.2 ± 145.4 | 313.0 ± 220.0 |
| Mean creatinine (µmol/l) | 127.6 ± 99.2 | 303.3 ± 75.4 |
| Mean INR | 13.1 ± 31.8 | 3.1 ± 1.4 |
| Malnutrition (%) | 12% | 50% |
| West Haven encephalopathy ≥2 (%) | 22% | 83% |
| Respiratory failure (%) | 0% | 33% |
| Mortality (%) | 2% | 83% |

**Key clinical features by ACLF severity**

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**#69**

## SPLEEN STIFFNESS PREDICTS ESOPHAGEAL VARICES IN LATIN AMERICAN CIRRHOTIC PATIENTS: CLINICAL AND ENDOSCOPIC CORRELATIONS

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**Introduction and Objectives:** Portal hypertension (PHT) is a major driver of complications and mortality in cirrhosis. Spleen stiffness measurement (SSM) via FibroScan® has emerged as a non-invasive marker of clinically significant PHT (CSPH) and esophageal varices (EV), yet evidence in Latin America is limited. This study aimed to correlate SSM with cirrhosis severity and markers of CSPH, compare its values with those of healthy controls, and determine an optimal cutoff for EV detection.

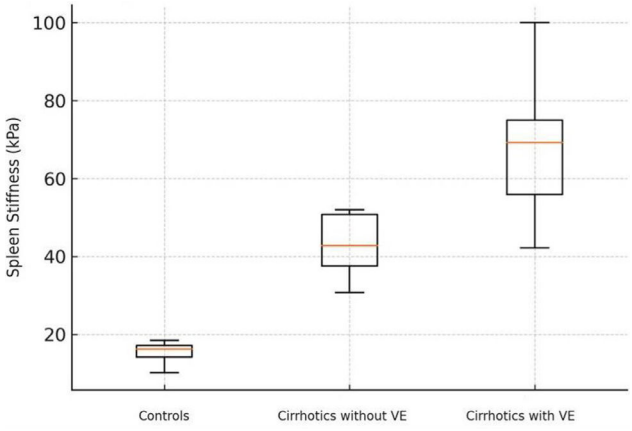
**Materials and Methods:** Cross-sectional study including 40 cirrhotic patients ($\beta$-blocker naïve) and 10 healthy controls. SSM (kPa) was measured with FibroScan® Expert 630. Variables included Child−Pugh class, MELD-Na, D'Amico stage (≥4 = decompensation), platelet count, Doppler ultrasound, and endoscopic confirmation of EV. Statistical analysis included non-parametric tests, ROC curves, Youden's index, and multivariable logistic regression (SSM, platelets, portal vein diameter, Child−Pugh).

**Results:** Mean age was 56.8 years; 60% male; BMI 28.8 kg/m$^2$; 40% obese. Median SSM was higher in cirrhotics (64.5 kPa) than in controls (16.0 kPa; $p < 0.001$). Among cirrhotics, higher SSM correlated with Child−Pugh C ($p = 0.004$), MELD-Na ≥ 22 ($p = 0.018$), decompensation ($p = 0.030$), and thrombocytopenia ($p = 0.021$). EV were present in 22 patients (55%), with SSM 67.3 vs 46.0 kPa ($p = 0.004$). AUC was 0.81; optimal cutoff 55 kPa. Only SSM remained independently associated with EV (OR 1.14 per kPa; AUC 0.91).

**Conclusions:** In this Latin American cohort, SSM ≥ 55 kPa was the most accurate non-invasive predictor of EV and may guide endoscopic screening in clinical practice.

**Conflict of interest:** None

**Comparison of Spleen stiffness measurement (kPa) between controls, cirrhotics without esophageal varices (VE), and cirrhotics with VE.**

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**#70**

## VISCERAL FAT AS A KEY DRIVER OF LIVER FIBROSIS IN MASLD: A DXA-BASED ANALYSIS

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**Introduction and Objectives:** Adiposity is associated with an increased risk of developing metabolic dysfunction-associated steatotic liver disease (MASLD).

Verify the association between liver fibrosis and visceral adiposity in MASLD by Dual-energy X-ray absorptiometry (DXA) method.

**Materials and Methods:** In a cross-sectional study, assessment of MASLD and significant fibrosis (F≥2) were performed by

ultrassonography and transient elastography, respectively. Dual-energy X-ray absorptiometry (DXA) were performed to assess fat mass index (FMI), visceral adipose tissue (VAT)and android-to-gynoid (A/G) ratio. Data are reported as median (IQR) or n (%); $p < 0.05$ was considered significant

**Results:** 141 participants were enrolled, 32(22.7%) had hepatic fibrosis. Age was 62.0(55.0–68.0) years, and 118(83.7%) were women. Adiposity parameters were waist-to-height ratio (WHtR) 0.66 (0.59–0.71); abdominal circumference (AC) 105.0(94.4–114.1) cm; fat mass index (FMI) 13.94 (10.50–17.20) kg/m$^2$; VAT 1784 (1203–2430) cm$^3$; and A/G 1.13 (1.04–1.23). The prevalence of obesity (BMI ≥ 30 kg/m$^2$), high FMI (> 14 kg/m$^2$), and A/G > 1 was 45 (31.9%), 52(36.9%), and 130(92.2%) respectively. The groups with and without fibrosis were compared. Age and sex were similar between groups. Those with fibrosis had significantly higher WHtR, AC, VAT, trunk fat mass, android fat mass, and total fat mass. (Table 1).

**Conclusions:** This study shows that central and visceral adiposity are significantly linked to liver fibrosis. These findings are measured by DXA, an accurate method, and are supported by simple and cost-effective clinical measures such as WHtR and AC.

**Conflict of interest:** None

**Table1. Clinical and body composition characteristics**

| Variable | General Population n = 141 | Without Fibrosis n = 109 | With Fibrosis n = 32 | p-value |
|---|---|---|---|---|
| Age | 62.0 (55.0–68.0) | 62.0 (55.0–67.0) | 65.0 (57.0–70.0) | 0.063 |
| Abdominal Circumference | 105.0 (94.4–114.1) | 103.0 (93.5–113.5) | 110.15 (101.7–118.25) | 0.029 |
| Waist-to-Height Ratio (WHtR) | 0.7 (0.6–0.7) | 0.65 (0.59–0.71) | 0.69 (0.64–0.75) | 0.029 |
| Arm Fat Mass (kg) | 3.4 (2.7–4.5) | 3.27 (2.49–4.44) | 4.0 (3.19–4.75) | 0.072 |
| Leg Fat Mass (kg) | 9.3 (7.1–12.8) | 9.24 (6.41–12.82) | 9.65 (8.22–12.60) | 0.269 |
| Trunk Fat Mass (kg) | 19.2 (14.5–24.3) | 18.47 (14.33–23.09) | 22.76 (18.88–26.35) | 0.020 |
| Fat Mass Ratio (Trunk-to-Leg Fat Mass) | 1.2 (1.1–1.4) | 1.2 (1.07–1.35) | 1.27 (1.07–1.38) | 0.806 |
| Android Fat Mass (kg) | 3.3 (2.5–4.4) | 3.2 (2.4–4.1) | 3.84 (3.05–4.67) | 0.047 |
| Gynoid Fat Mass (kg) | 5.2 (3.8–6.3) | 4.85 (3.49–6.35) | 5.46 (4.66–6.44) | 0.102 |
| Total Fat Mass (kg) | 33.5 (25.8–42.0) | 32.46 (24.51–41.06) | 37.81 (30.91–45.66) | 0.043 |
| Android-to-Gynoid Fat Ratio (A/G Ratio) | 1.1 (1.0–1.2) | 1.13 (1.04–1.24) | 1.13 (1.04–1.22) | 0.681 |
| Fat Mass Index (FMI) (kg/m$^2$) | 13.9 (10.5–17.2) | 13.78 (9.82–16.84) | 15.1 (12.73–17.86) | 0.104 |
| Visceral Adipose Tissue Volume (cm$^3$) | 1784.0 (1203.0–2430.0) | 1504.0 (1171.0–2364.0) | 2055.5 (1570.0–2598.25) | 0.026 |
| Visceral Adipose Tissue Mass (g) | 1683.0 (1135.0–2292.0) | 1419.0 (1068.0–2231.0) | 1939.0 (1488.75–2451.75) | 0.025 |

**Legend: Values are presented as median (interquartile range). Bold p-values indicate statistical significance ($p < 0.05$).**

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**#71**

## NON-INVASIVE ASSESSMENT OF STEATOHEPATITIS AND LIVER FIBROSIS IN THE POPULATION AT RISK FOR METABOLIC STEATOTIC LIVER DISEASE

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**Introduction and Objectives:** The overall global prevalence of metabolic dysfunction-associated steatotic liver disease (MASLD) is 30%, with a higher prevalence in Latin America (44,4%). Metabolic dysfunction-associated steatohepatitis (MASH) is a spectrum of MASLD that can progress to advanced fibrosis, cirrhosis, hepatic decompensation and hepatocellular carcinoma. Non-invasive tests (NITs) can help identify and monitor the progression of MASH, as well as predict the risk of liver-related outcomes.

To evaluate the association between steatohepatitis, liver fibrosis and progression predictors using non-invasive tests in the population at risk for MASLD.

**Materials and Methods:** A prospective observational study based on the analysis of cross-sectional data from adults in a tertiary hospital who provided informed consent. Inclusion criteria were age between 18 and 75 years and the presence of type 2 diabetes, obesity or metabolic syndrome. The NITs used were FIB 4 index, ultrassonography Fatty Liver Index (FLI), transient elastography and shear wave elastography. Data were analyzed using R and were submitted to the non-parametric Mann-Whitney or Wilcoxon tests. A significant level of 5% was adopted.

**Results:** This study included 131 patients. Of these, 81 (61.8%) had steatohepatitis (FLI≥ 4), 35 (26.7%) significant fibrosis (F≥ 2) and 17 (12.9%) advanced fibrosis (F≥ 3). Gamma-glutamil transferase (GGT) was the only serum biomarker with a statistically significant correlation with both steatohepatitis (p = 0.01582) and significant fibrosis (p = 0.0217). Data are described in table1.

**Conclusions:** GGT was significantly associated with the presence of steatohepatitis and significant fibrosis, suggesting that GGT may serve as an additional marker to alert clinicians to the presence of MASH and fibrosis.

**Conflict of interest:** None

| | Total Population | No Fibrosis | Fibrosis | p value |
|---|---|---|---|---|
| Total | 131 | 96 | 35 | - |
| Baseline characteristics of the participants | | | | |
| Age, years (median/IQR) | 64 (57 -69.5) | 63 (56.7 – 69) | 66 (58 – 71) | 0.1159 |
| Sex, female (N - %) | 108 (82.4) | 77 (80.2) | 31 (88.5) | 0.3932 |
| Alcohol consumption (N - %) | | | | 0.0546 |
| Abstaining | 79 (60.3) | 53 (55.2) | 26 (74.2) | |
| < 10 g/day | 36 (27.4) | 29 (30.2) | 7 (20) | |
| > 10 g/day | 9 (6.8) | 9 (9.3) | 0 | |
| Anthropometric measurements | | | | |
| BMI (median - kg/m$^2$) | 31.5 | 31 | 33.3 | 0.1705 |
| Waist circumference (median - cm) | 103.25 | 102 | 110 | 0.1234 |
| Hip circumference (median - cm) | 105.5 | 104.5 | 108.5 | 0.1737 |
| Waist-to-height ratio | 65.14 | 64.8 | 66.9 | 0.185 |
| Laboratory and imaging-based parameters (median/IQR) | | | | |
| AST (U/L) | 21 (18 – 28) | 20 (17 – 27) | 26 (20 – 35) | 0.002392 |
| ALT (U/L) | 22 (16 – 29.5) | 21 (15 – 27.2) | 28 (20 – 42) | 0.002341 |
| Platelets (10$^3$/mm$^3$) | 239 (196.5 – 281) | 245 (199.7 – 280.) | 221 (174 – 292.5) | 0.3625 |
| GGT (U/L) | 33 (24 – 55.2) | 32 (24 – 43) | 53 (27 – 72) | 0.0217 |
| Ferritin (ng/mL) | 129.87 (71.5 – 255) | 139 (78 – 277.4) | 97 (56.1 – 156.2) | 0.06386 |
| CRP (mg/dL) | 0.43 (0.24 – 0.83) | 0.43 (0.24 – 0.73) | 0.45 (0.28 – 0.87) | 0.6687 |
| Fibroscan (kPa) | 5.5 (4.7 – 6.8) | 5.1 (4.5 – 5.9) | 9.1 (7.8 – 13.2) | < 0.001 |
| 2D-SWE (kPa) | 5.4 (4.4 – 6.8) | 5 (4.1 – 5.7) | 7.4 (6.6 – 10.1) | < 0.001 |
| US-FLI (kPa) | 5.5 (4 – 7) | 5 (3 – 7) | 6 (4.2 – 7) | 0.1274 |
| FIB-4 | 1.19 (0.87 – 1.69) | 1.17 (0.86 – 1.58) | 1.34 (0.94 – 2) | 0.03868 |
| FIB-4 Classification (N - %) | | | | 0.05654 |
| Low FIB-4 | 73 (55.7) | 57 (59.3) | 16 (45.7) | |
| Indeterminate FIB-4 | 45 (34.3) | 33 (34.3) | 12 (34.2) | |
| High FIB-4 | 13 (9.9) | 6 (6.2) | 7 (20) | |

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