TACE	19 (52.7)
Ablation	4 (11.1)
TACE + Ablation	4 (11.1)
Medical	1 (2.7)
Medical and radiological	3 (8.3)
Radiological and transplant	4 (11.1)
Transplant	1 (2.7)
Treatment response evaluation	
complete	4 (11.1)
Partial	9 (25)
Stable	11 (33.3)
Progression	10 (27.7)

BCLC, Barcelona Clinic Liver Cancer; HCC, Hepatocellular carcinoma; MAFLD, Metabolic dysfunction-associated fatty liver disease; MELD, Model for End-Stage Liver Disease; MELD-Na, Model for End-Stage Liver Disease-Sodium; TACE, Transarterial chemoembolization.

https://doi.org/10.1016/j.aohep.2025.101796

Pirfenidone limits the progression of malignancy and slows the development of fibrosis in experimental hepatocarcinoma.

Scarlet Arceo-Orozco[1], Fernando Caloca-Camarena[1], Roberto Flores-Peña[1], Marina Galicia-Moreno[1], Hugo Christian Monroy-Ramírez[1], Juan Armendáriz-Borunda[1,2]

[1] *Institute of Molecular Biology in Medicine and Gene Therapy, University Center for Health Sciences (CUCS), University of Guadalajara, Guadalajara, Mexico*
[2] *School of Medicine and Health Sciences, Tecnológico de Monterrey Guadalajara Campus, Zapopan, Mexico*

Introduction and Objectives: Hepatocarcinoma (HCC) is the fourth cause of cancer death in Mexico, derived from fibrotic, metabolic and inflammatory alterations, modifiable by pirfenidone (PFD), which has shown beneficial effects at these levels. Our aim is to demonstrate the hepatoprotection of PFD in a model of HCC progression.

Materials and Patients: To evaluate the effect of PFD in a setting similar to that of patients at risk for HCC, we developed an experimental model of neoplastic progression, with damage induction for 9 weeks, followed by free progression of the disease. Male Fischer-344 strain rats (n=18) were divided into three groups: CTL: untreated control; HCCp: damage progression group (generated by administration of diethylnitrosamine (DEN) 50 mg/kg and 2-Acetaminofluorene (2AAF) 25 mg/kg weekly for 9 weeks and damage progression); and HCCp/PFD: damage progression group plus administration of PFD 300 mg/kg daily starting from week 9. The weight of the animals in the different study groups was recorded, and morphological and histopathological analyses of the liver were performed. H&E, Masson's Trichrome (MCT) and Sirius Red (SR) staining were performed, and GPC-3 and Ki-67 proteins were analyzed by immunohistochemistry. This was done in order to evaluate the presence and severity of fibrosis, malignancy and proliferation markers. Data were analyzed by ANOVA followed by Tukey's post-hoc tests to identify differences between study groups. Comparisons with p values ≤ 0.05 were considered significant.

Results: Treatment with PFD did not produce a difference in weight between the groups. However, it caused a tendency to decrease in body weight, net weight and relative liver weight. The morphological analysis of the liver of the HCCp/PFD group showed surface characteristics, coloration and consistency similar to the control, in addition to the evident attenuation in the progression of cancerous nodules, with a 34.02% reduction in the total tumor incidence. At the tissue level, PFD decreased the accumulation of extracellular matrix and collagen I and III deposition. The fibrotic bridges present in the HCCp/PFD group are incipient and of interstitial disposition, contrary to the intensity and tissue restriction shown in the HCCp group. In addition, dysplastic changes were limited after PFD treatment, with a decrease in hyperchromasia and nuclear pleomorphism, fewer cells with loss of polarity and nucleus/cytoplasm ratio, together with a decrease in necrotic cells, as well as a decrease in ductal reaction and destruction of portal triads compared to the damage group. Finally, in the HCCp/PFD group, the expression of both GPC-3 and Ki-67 was reduced, slowing tumor progression.

Conclusions: PFD administration had a hepatoprotective effect on tumor progression and slowing of fibrosis in our experimental model based on our results, we can conclude that PFD could work at the level of primary prevention of HCC in patients with chronic liver disease.

Ethical statement: Our research with animal models is governed by the highest ethical and animal welfare standards. The use of animals was scientifically justified, minimizing their suffering and providing them with adequate living conditions. All regulations were complied with, and transparency and accountability in research were continuously re-evaluated and maintained.

Declaration of interests: None.

Funding: This project has funding from both CONACYT and internal funds from the University of Guadalajara obtained from Dr. Juan Armendáriz Borunda and Dr. Christian Monroy Ramírez.

https://doi.org/10.1016/j.aohep.2025.101797

The neutrophil-to-lymphocyte ratio (NLR) can predict the presence of bacterial infections in hospitalized patients with decompensated cirrhosis.

Paloma M. Diego-Salazar, Diego F. Abendaño-Rivera, Cristian Y. Sánchez-Sánchez, Karina Cazarín-Chávez, Kevin S. Vázquez-Hernandez, Fátima Higuera-de-la-Tijera

Gastroenterology and Hepatology Department, General Hospital of México "Dr. Eduardo Liceaga", Mexico City, Mexico

Introduction and Objectives: Liver cirrhosis can increase susceptibility to bacterial infections, which are often underestimated due to subtle or absent symptoms and the absence of additional biochemical markers. Early identification of these infections is limited in these patients. The objective is to determine the effectiveness of the Neutrophil-to-Lymphocyte Ratio (NLR) as a predictor of bacterial infections in hospitalized patients.

Materials and Patients: The aim of this retrospective, observational, analytical, cross-sectional study was to validate a prognostic index for patients diagnosed with liver cirrhosis and hospitalized from October 2023 to March 2024. The study included variables such as age, sex, etiology of liver disease, decompensation events leading to hospitalization, and biochemical data to calculate MELD, Child-Pugh, MELD-Na scores, and the degree of acute-on-chronic liver failure upon admission using the EASL-CLIF-ACLF, European Association for the Study of the Liver - Chronic Liver Failure Acute-on-Chronic Liver Failure score. Additionally, the presence of bacterial infection was determined through laboratory tests, imaging studies, and corresponding cultures. The Neutrophil-to-Lymphocyte Ratio was established by dividing the respective total cell counts. The study summarized the variables using descriptive statistics and constructed the area under the curve (AUC-ROC) with 95% confidence intervals. A p-value <0.01 was considered significant.

Results: A total of 183 patients were included in the study. There were 93 (50.8%) men, with an average age of 55.8 $\pm$ 10 years. The

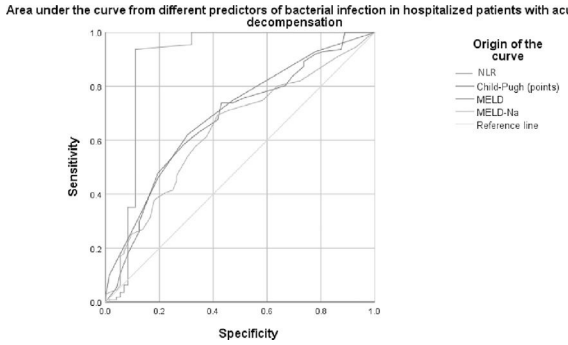
distribution by etiology was as follows: Alcohol 72 (39.3%), MASLD 55 (30.1%), Autoimmune 27 (14.8%), Hepatitis C Virus 16 (8.7%), MetALD 16 (8.7%). According to the Child-Pugh score, 91 (49.7%) were class C, 68 (37.2%) were class B, and 24 (13.1%) were class A. Acute decompensations reported were: Variceal bleeding in 90 patients (49.1%), Ascites in 79 (43.1%), and Hepatic Encephalopathy in 102 (55.7%). The degree of acute-on-chronic liver failure upon admission was established: Grade 1 in 30 patients (16.3%), grade 2 in 29 (15.8%), and grade 3 in 12 (6.5%). It was found that 111 (60.7%) patients had bacterial infections during hospitalization, which were urinary infections 69 (37.7%), spontaneous bacterial peritonitis 22 (12%), pneumonia 13 (7.1%), bacteremia 7 (3.8%). NLR ≤ 1.9 predicted bacterial infection with a sensitivity of 94% and specificity of 89% (AUC-ROC: 0.89, 95% CI 0.82-0.95, p <0.0001), compared to other scales such as Child-Pugh, MELD, or MELD-Na with AUC-ROC of 0.69 (0.62-0.77), 0.68 (0.60-0.76), 0.64 (0.56-0.72) respectively.

Conclusions: The Neutrophil-to-Lymphocyte Ratio (NLR) is highly effective in predicting bacterial infections in patients with liver cirrhosis, surpassing the Child-Pugh, MELD, and MELD-Na scales. This indicates that NLR is a valuable tool for early identification of infections in this patient population.

Ethical statement: This study was reviewed and approved by the ethics committee.

Declaration of interests: No conflicts of interest.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.



NLR: Neutrophil-to-Lymphocyte Ratio; MELD: Model for End-Stage Liver Disease; MELD-Na: Model for End-Stage Liver Disease with Sodium.

https://doi.org/10.1016/j.aohep.2025.101798

Liver alterations found in patients with inflammatory bowel disease in a tertiary care center.

Kenia M. Bastida-Guadarrama[1],
Jorge Luis De-León-Rendón[2],
Viridiana López-Ladrón-de-Guevara[1],
Santiago Camacho-Hernandez[1],
Fátima Higuera-de-la-Tijera[1]

[1] *Department of Gastroenterology and Hepatology, General Hospital of Mexico "Dr. "Eduardo Liceaga."*
[2] *Department of Coloproctology, General Hospital of Mexico "Dr. "Eduardo Liceaga." Mexico City, Mexico*

Introduction and Objectives: Inflammatory bowel disease (IBD) encompasses two main conditions: Crohn's disease (CD) and ulcerative colitis (UC); the association between these diseases and liver diseases has been described. The objective of this work is to report the frequency of these alterations in a tertiary hospital.

Material and Patients: Observational, retrospective, descriptive, case series type. Patients with a diagnosis of IBD were included, including its two variants, CD and UC. An intentional search was carried out for alterations in the liver biochemical profile, findings in imaging methods and their clinical correlation, primary biliary cholangitis (PBC), primary sclerosing cholangitis (PSC), autoimmune hepatitis (AIH), among other anatomical alterations. Qualitative data are expressed in percentages and quantitative data in mean±SD.

Results: 62 patients were included, of which 31 were men and 31 were women, with a mean age of 42.74±15.47 years. Within this universe, there were 22 patients with CD (35.4%), 40 patients with UC (64.5%) who, according to the Montreal classification, were classified as E1=4 patients (10%), E2=12 patients (30%), E3=24 patients (60%). There were 16 patients (25.8%) who had some reported liver alteration, of which 8 (12.9%) with autoimmune liver diseases, 5 with PSC (8.06%), 2 with PBC (3.22%), 1 with HAI (1.61%). When intentionally searching for liver morphological alterations and as an incidental finding, they were found 3 (4.83%) simple hepatic cysts, 1 (1.61.%) hepatic hemangioma, and finally, 2 (3.22%) hepatitis C virus (HCV) infections.

Conclusions: IBD is commonly associated with autoimmune liver disorders. Likewise, the CUCI-PBC and CUCI-HAI relationship was found, which agrees with the international literature and is extrapolated with the population studied. Other incidental findings are also frequent, especially the high frequency of HCV compared to the general population.

Ethics statement: The study was conducted in accordance with the Helsinki Declaration (2013 World Medical Association update).

Declaration of interests: None.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

https://doi.org/10.1016/j.aohep.2025.101799

Correlation of Cardiovascular Risk Score with Alterations in Carotid Intima-Media Thickness in Patients with MASLD

José L. Vargas-Basurto[1], Ana D. Cano-Contreras[2],
Héctor R. Ordaz-Alvarez[1],
Genesis P. Martinez-Perez[1],
Kevin D. Gonzalez-Gomez[1], Jose M. Remes-Troche[1]

[1] *Institute of Medical and Biological Research, Universidad Veracruzana, Veracruz, Mexico*
[2] *Master's Degree in Translational Biomedicine, Institute of Medical and Biological Research, Universidad Veracruzana, Veracruz, Mexico*

Introduction and Objectives: MASLD is associated with cardiovascular disease due to systemic inflammation and endothelial dysfunction. Carotid intima-media thickness (CIMT) and atherosclerosis are considered markers of generalized atherosclerosis and increased cardiovascular risk (CVR). The objective of this study is to describe the correlation between CVR and changes in CIMT in patients with MASLD.

Materials and Patients: This observational, cross-sectional, analytical study was conducted at the Instituto de Investigaciones Médico-Biológicas liver clinic from January 2023 to April 2024. Patients who met the eligibility criteria provided informed consent and underwent the following procedures: transitional liver elastography (TE), carotid Doppler ultrasound (USG), somatometric measurements, and biochemical tests. Cardiovascular risk scores (Framingham, ASCVD, SCORE2) and FIB-4 were calculated. Participants were categorized into two groups based on carotid intima-media thickness, altered CIMT (>1.1 mm) and normal CIMT (<1.1