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**Introduction and Objectives:** Metabolic dysfunction–associated steatotic liver disease (MASLD) is increasingly recognized as a precursor to hepatocellular carcinoma (HCC). In addition, sustained inflammation is emerging as a critical promoter of the transition from steatosis to liver cancer. To evaluate the role of inflammation in hepatocarcinogenesis induction by MASLD.

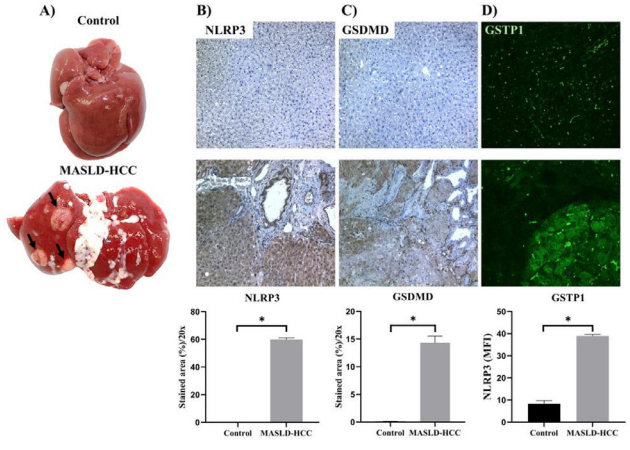
**Materials and Methods:** Fischer 344 rats were fed a diet rich in fat, cholesterol, and sucrose, and administered low doses of $CCl_4$ and DEN intraperitoneally for 16 weeks. Liver damage, steatosis, inflammatory, and carcinogenesis-related markers were assessed through biochemical assays, immunohistochemical, and western blot analysis. Data were analyzed using one-way analysis with significance set at $p < 0.05$. All the experiments were approved by the ethics committee of CINVESTAV-IPN (protocol No. 310-20).

**Results:** The liver of MASLD-HCC groups shows visible tumor nodules and surface alterations (Figure 1A). Immunohistochemical and immunofluorescence analysis revealed a marked increase in NLRP3, GSDMD, and GSTP1 levels in MASLD-HCC group (Figure 1B-D), indicating the activation of inflammasome and pyroptosis pathways and suggesting a link between chronic inflammation and cellular transformation. The hepatotoxins induced a strong inflammatory response, with increased hepatic expression of NLRP3 inflammasome components. These alterations were accompanied by the increase in serum liver damage and neoplastic markers, which correlated with the appearance of neoplastic lesions.

**Conclusions:** Chronic inflammation induced by diet and hepatotoxic compounds serves as a central driver in the HCC development-associated MASLD. This finding supports the hypothesis that the inflammation-carcinogenesis axis plays a significant role in MASLD progression.

**Conflict of interest:** None

**Key markers involved in amplifying inflammatory responses driving hepatocarcinogenesis in the MASLD context.**

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## EARLY IDENTIFICATION OF LIVER TRANSPLANTATION REQUIREMENT IN ALCOHOL-ASSOCIATED HEPATITIS

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**Introduction and Objectives:** Severe alcohol–associated hepatitis (AH) has a high risk of short-term mortality especially in those r with acute–on–chronic liver failure (ACLF). Delayed evaluation for liver transplantation (LT) in severe AH often worsens nutritional and functional status. This study aimed to identify early mortality predictors.

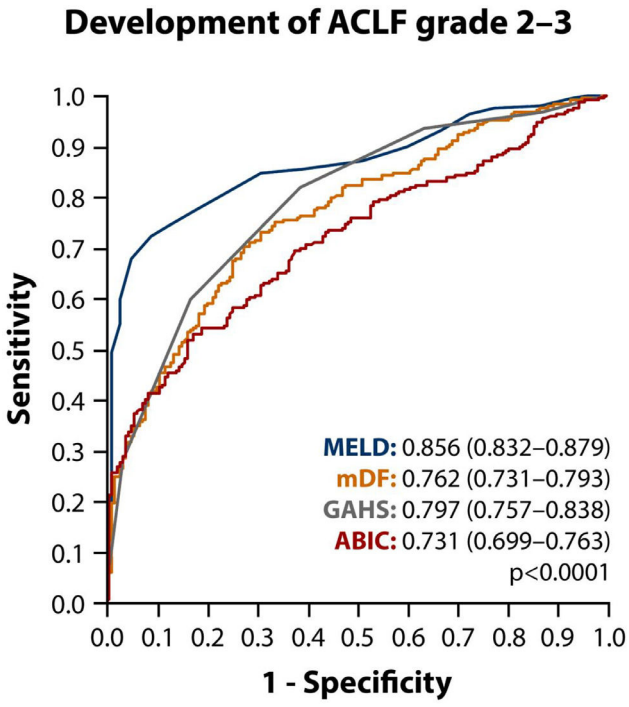
**Materials and Methods:** In a prospective study, 981 adults with AH were enrolled from 32 centers in 14 countries (January 2015 –September 2024). ACLF was classified by EASL-CLIF criteria. Primary outcomes were 30- and 90-day mortality. Competing-risk regression (LT as the competing event) and receiver-operating-characteristic (AUROC) analyses evaluated clinical scores predicting development of ACLF grades 2–3 within seven days of admission.

**Results:** The mean age was 48.3 ± 11.2 years, and 88.7% were male. Within the first week, 68.8% of patients had ACLF—30.1% with grade 1, 34.5% with grade 2, and 35.4% with grade 3. Overall survival rates were 84.7% at 30 days and 75.8% at 90 days. Adjusted analyses identified increasing age, infections, higher admission MELD score, and ACLF grades 2 (subdistribution hazard ratio [sHR] 1.59) and 3 (sHR 2.58) as independent predictors of 90-day mortality. The MELD score was the best predictor of developing ACLF grades 2–3 (AUROC 0.869), with MELD ≥28 showing 64% sensitivity and 90% specificity. These findings were confirmed in two external validation cohorts: a prospectively enrolled U.S. cohort (n=234) and a retrospective cohort from seven countries (n=602).

**Conclusions:** ACLF and infections are key determinants of mortality in severe AH. The MELD score at admission is a robust early predictor of high–grade ACLF, supporting its use to determine LT candidacy earlier.

**Conflict of interest:** None

**Figure: Comparison of the performance of different models in predicting the development of acute-on-chronic liver failure (ACLF) grade 2-3 during the first week of admission using the area under the Receiver Operating Characteristic (ROC) curves. Analysis included the Model of End-stage Liver Disease (MELD), the Maddrey's discriminant function (mDF), and the Age-Bilirubin-International Normalized Ratio-Creatinine (ABIC) scores.**

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## LONG-TERM ALBUMIN THERAPY MAY IMPROVE SURVIVAL IN CIRRHOSIS WITH ASCITES: A SYSTEMATIC REVIEW AND META-ANALYSIS

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