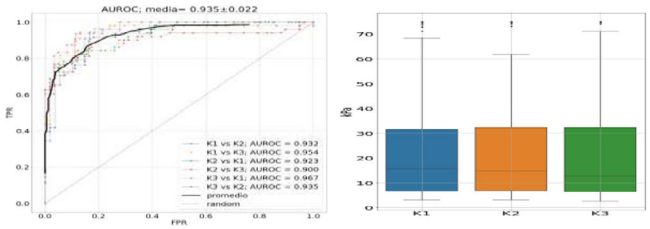

Figures 1 and 2.
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Liquid biopsy of patients with advanced liver fibrosis reveals the association of methylation in CpGs and miRNAs expression with the degree of severity

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Introduction and Objective: This study aimed to assess whether the expression of specific miRNAs and the percentage of DNA methylation of the Peroxisomal Proliferator-Activated Receptors (PPAR) α, γ and δ genes in tissue and liquid biopsy from patients with advanced liver fibrosis (F3 and F4) is associated to the degree of severity.

Materials and methods: Transjugular liver biopsy and liquid biopsy were collected from 23 patients with sustained viral response to the hepatitis C virus, with advanced residual fibrosis (F3 and F4). The percentage of methylation in CpG islands of the promoters of the PPARα, PPARγ and PPARδ genes and the expression levels of miRNAs were determined. Masson's trichrome hematoxylin-eosin staining was performed. DNA was extracted from tissues and plasma, and percent methylation was measured by pyrosequencing. Extraction and isolation of miRNAs from liver tissue were performed: miR-21, miR-34, miR-122, miR181b, miR192, miR-200a/b and their expression level compared to miR-16 was evaluated. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: Higher promoter methylation percentages were observed in patients with more severe degrees of fibrosis (F4), both in tissue and in liquid biopsy. In addition, overexpression of miRNAs was associated with the degree of fibrosis.

Discussion: Epigenetic mechanisms (DNA methylation and microRNA expression) regulate the expression of multiple genes and their status may be a biomarker associated with the degree of fibrosis.

Conclusion: Liquid biopsy is an effective and accessible method for evaluating the degree of fibrosis.

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

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Increase in liver fibrosis in patients with inflammatory bowel disease at the inflammatory bowel disease clinic, *Centro Medico Nacional 20 de noviembre*

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Introduction and Objective: To determine the progression to liver fibrosis secondary to non-alcoholic fatty liver disease (NAFLD) by non-invasive methods in patients with Inflammatory Bowel Disease (IBD).

Material and Methods: Descriptive, cross-sectional, and retrospective study. Variables analyzed: age, sex, type of IBD, treatment, Fibrosis-4 (FIB-4) and NAFLD fibrosis score (NFS). The SPSS version 25 program was used, with univariate analysis, 95% CI and significant $P < 0.05$.

Results: Of 125 patients, 88 (70.4%) had chronic nonspecific ulcerative colitis (UC) and 37 (29.6%) had Crohn's disease (CD). NAFLD was found in 20 patients (16%), with fibrosis in 20% (4 patients), as well as cirrhosis (20%) without statistical significance (Table 1). Grade F0-F2 (NFS<1.455) was more frequent in both groups, with no significant correlation with IBD. Ustekinumab correlated with NAFLD without fibrosis ($P<0.05$), while mesalazine correlated significantly with liver fibrosis (F3-F4).

Discussion: NAFLD occurs in 50% of patients with IBD. The pathogenesis includes, on the one hand, the release of cytokines and adipokines that lead to increased inflammation and hepatic fibrosis and, on the other, altered intestinal permeability, with the consequent hepatic fatty infiltration. For its diagnosis, non-invasive tools were created, such as NFS and FIB-4, with the best predictive value for advanced liver fibrosis.

Conclusions: The occurrence of NAFLD and progression to fibrosis were significantly correlated with the treatment of the underlying disease.

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

	UC n=88	CROHN n=37
Sex (%)		
Mujeres	48 (55)	20 (54)
Hombres	40 (45)	17 (46)
Age(years)		
Average	50 (± 16)	48 (± 17)
Comorbidities (%)		
NAFLD	12 (13.6)	8 (21.6)
HBP	25 (28.4)	10 (27)
T2D	21 (23.9)	5 (13.5)
Insulin resistance	22 (25)	3 (8.1)
Dyslipidemia	43 (48.9)	13 (35.1)
Hypothyroidism	9 (10.2)	2 (5.4)
EII treatment (%)		
Infliximab	22 (25)	2 (5.4)
Certolizumab	28 (31.8)	10 (27.0)
Adalimumab	16 (18.2)	11 (29.7)
Ustekinumab	8 (9.0)	5 (13.5)
Mesalazina	14 (15.9)	7 (18.9)
Diagnostic scales in NAFLD		
FIB-4 (%)		
< 1.45	7 (58.3)	6 (75)
>1.45 <3.25	3 (25)	0 (0)
>3.25	2 (16.7)	2 (25)
NAFLD fibrosis score (%)		
<-1.455	8 (66.6)	6 (75)
-1.455- 0.675	4 (33.3)	1 (12.5)
> 0.675	0 (0)	1 (12.5)

Table 1. Demographic characteristics of patients with inflammatory Bowel Disease
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Effect of zinc supplementation in patients with cirrhosis and dysgeusia

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Introduction and Objective: The prevalence of dysgeusia in patients with cirrhosis is higher than 50%; the aim of the study was to evaluate the effect of zinc supplementation in patients with cirrhosis and dysgeusia.

Materials and Methods: Randomized clinical trial, double-blind, controlled with placebo of 34 patients. The intervention consisted of 100mg/day of zinc for six months. Improvement of dysgeusia was evaluated according to changes in perception (PT) and recognition (RT) thresholds of five flavors. Nutrient consumption was evaluated by SNUT questionnaire. Meanwhile, quality of life (QoL) was evaluated by LDQOL questionnaire. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: 50% (n=17) of patients were male, 76.5% (n=26) presented PT dysgeusia, meanwhile 85%(n=29) presented RT dysgeusia; salty and umami were the most affected flavors. Twenty-eight patients accomplished the follow-up. PT dysgeusia showed significant improvement in the intervention group. (28.6% vs 57.1%, p=0.004) (Figure). Changes in RT and evaluation of each flavor did not show. Patients of intervention group increased protein consumption (61.8 g [48.6-67.1] vs 57.1g [39.5-60.5], p=0.05). According to QoL, patients with zinc supplementation showed higher punctuation of the worry domain (6.0 [5.2-6.4] vs. 4.4[2.9-5.5], p=0.007) and global QoL. (5.5[5.1-6.1] vs 5.0[4.7-5.8], p=0.05)

Discussion: The presence of dysgeusias in patients with cirrhosis could have a negative impact on nutritional status and its consequences; zinc supplementation seems to be a treatment option in these patients.

Conclusions: Zinc supplementation improves the PT, protein consumption and global QoL in patients with cirrhosis and dysgeusia.

Funding: The resources used in this study were from the hospital without any additional financing.

Declaration of interest: The authors declare no potential conflicts of interest.

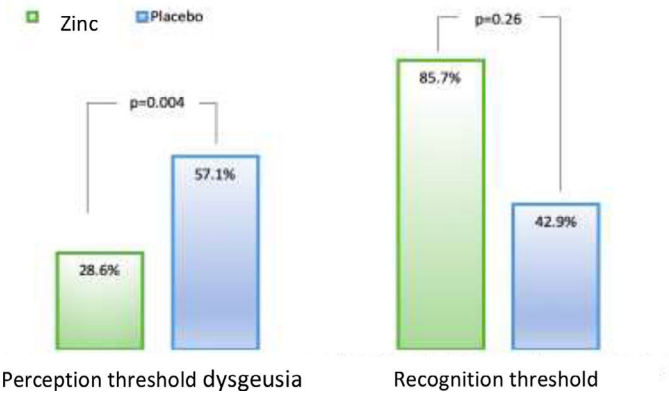

Figure1. Differences in prevalence of dysgeusia in PT and RT after six months
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6-Week mortality predictors in patients with acute variceal bleeding from the western national medical center of the Mexican social security institute

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Introduction and Objectives: To identify the predictive factors for mortality at six weeks in patients with variceal bleeding.

Materials and methods: A retrospective cohort study in the Department of Gastroenterology of the National Medical Center of the West, from January-December 2021.

Results: Seventy patients with variceal bleeding were included (table 1). The 6-week mortality was 25.7% and the early rebleeding rate was 22.9%. The main predictors of mortality were a Child-Pugh class C score OR 7.67(95% CI, 2.25-26.15, p=0.0011), a MELD score ≥20 OR 20.0(95% CI, 5.58-94.74, p=<0.0001), ABC score ≥8 OR 32.0 (95% CI, 3.91-261.54, p=0.0012) and Blatchford score ≥15 OR 9.60 (95% CI, 2.51-38.16, p=0.0013); Similarly, the presence of other decompensations such as acute kidney injury (OR 4.77, p=0.0088), hepatic encephalopathy (OR 18.85, p=<0.0001), ACLF (OR 65.0, p=<0.0001), and a no-SBP infection (OR 3.83, p=<0.0001) were identified as predictors