(95% CI: 3.8–54.0), p = 0.0001 and alcoholic etiology-OR = 5.3 (95% CI: 1.1–26.3), p = 0.03.

	Spearman r correlation coefficient
Age	r = 0.089, p = 0.30
Male gender	r = 0.052, p = 0.54
BMI	r = 0.103, p = 0.23
Alcoholic etiology	**r = 0.186, p = 0.03**
Spleen size	r = 0.082, p = 0.34
Presence of CCM	**r = 0.323, p = 0.0001**
Child-Pugh score	**r = 0.259, p = 0.002**
MELD score	**r = 0.237, p = 0.005**
Presence of portal hypertension	r = 0.107, p = 0.21
Albumin	r = –0.169, p = 0.06
Platelet count	r = 0.037, p = 0.67
Prothrombin time	**r = –0.197, p = 0.02**

Conclusion: The presence of CCM is a strong predictor of acute kidney injury development among cirrhotic patients.

Non-invasive assessment of liver disease except NAFLD

OS013

Association of long term methotrexate therapy with liver fibrosis markers: a multi-centre prospective case-control study

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Background and aims: Incidence of acute drug-induced liver injury due to methotrexate (MTX) reduces significantly after the first year of treatment. However, decompensated cirrhosis attributed to MTX accounts for 0.07% of patients listed/transplanted in the USA. We evaluated the risk of long-term MTX therapy on liver fibrosis prospectively in a case-control study.
Method: Between 2014–2021, adult patients diagnosed with Rheumatoid Arthritis (RA) or Psoriasis (PS) were recruited prospectively from six UK sites. Patients on MTX for ≥6 months were defined as cases, whereas those with RA or PS for ≥2 years who never received MTX were controls. All patients underwent full liver profile, enhanced liver fibrosis (ELF) markers, and transient elastography (TE). Multivariate analysis was performed using logistic regression and results were presented as adjusted odds ratio (OR) and 95% confidence interval.
Results: Of 999 patients included (mean age 60.8 ± 12 years, 622 females (62.3%)), 976 had valid TE values; 149 (15.3%) had liver stiffness ≥7.9 KPa. Of 892 with available ELF, 262 had ELF score ≥9.8 (29.4%). Age and BMI were independently associated with elevated liver stiffness and ELF. Diabetes was associated with significant fibrosis defined by liver stiffness ≥7.9 KPa, OR = 3.21 (1.96–5.21), p < 0.001. But, neither MTX cumulative dose nor duration of exposure was associated with elevated liver stiffness [OR = 1.02 (0.93–1.12) and 1.00 (0.99–1.0), respectively] and ELF score [OR = 1.06 (1.0–1.12) and 1.00 (0.99–1.0), respectively]. Regular use of non-steroidal anti-inflammatory drugs was associated with ELF score ≥9.8, OR = 1.78 (1.22–2.60), p = 0.003.
Conclusion: Lack of association of MTX cumulative dose and duration with liver fibrosis in RA or PS indicates that the risk of liver fibrosis due to MTX itself might have been overestimated. The degree of inflammation in RA and PS may confound ELF as a marker to detect fibrosis.

Table: Demographic and phenotypic features for cases and controls

Characteristics	MTX group (n = 876)	Control group (n = 123)	p
Age (years), mean (SD)	61.6 (11.6)	55.6 (13.5)	**<0.001**
Female, n (%)	560 (63.9)	62 (50.4)	**<0.01**
Diagnosis, n (%)		55 (44.7)	**<0.001**
RA	615 (70.2)	67 (54.5)	
PS	241 (27.5)	1 (0.8)	
Both	20 (2.3)		
Type 2 Diabetes	100 (11.5)	21 (17.1)	**NS**
Hyperlipidaemia	225 (25.9)	28 (22.8)	**NS**
BMI (kg/m^2), mean (SD)	29.9 (6.7)	30.9 (7.5)	**NS**
Alcohol >14 units/week, n (%)	83 (9.5)	25 (20.3)	**<0.001**
Fibrosis markers			
TE groups, n (%)	731 (85.5)	96 (79.3)	**0.08**
Low <7.9	124 (14.5)	25 (20.7)	
High ≥ 7.9			
ELF groups, n (%)	562 (71.4)	68 (64.8)	**NS**
Low risk <9.8	202 (25.7)	34 (32.4)	
Moderate risk (≥9.8 to <11.3)	23 (2.9)	3 (2.9)	
High risk ≥11.3			

NS: Not significant.

OS014

Development and validation of a machine learning-based model for varices screening in compensated cirrhosis (CHESS2001): an international multicenter study

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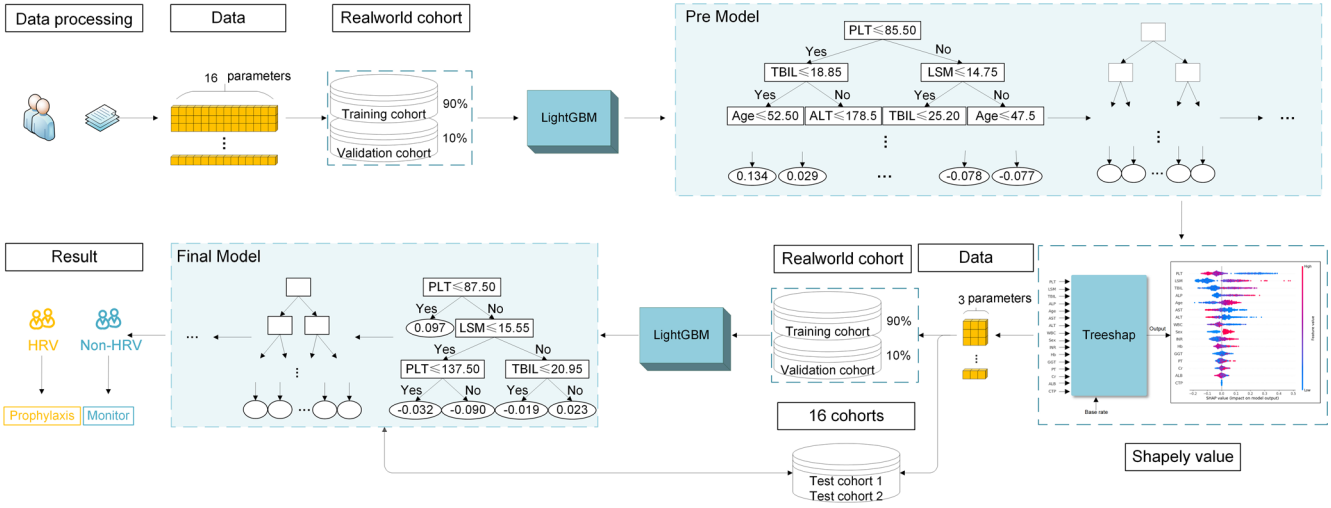

Figure: (abstract: OS014)

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Background and aims: Only a few patients with compensated cirrhosis who underwent esophagogastroduodenoscopy (EGD) screening for varices were found to have varices needing treatment (VNT). Our study aimed to identify a novel machine learning-based model (ML EGD) for ruling out VNT and avoiding unnecessary EGD in patients with compensated cirrhosis.
Method: A total of 2794 patients from China, Singapore and India were enrolled. Of them, 1283 patients in a real-world cohort from one university hospital, 966 in a multicenter cohort (test cohort 1) from 14 university hospitals, and 545 in an international cohort (test cohort 2) from Singapore and India were included, respectively. For the real-world cohort, patients were shuffled and sampled randomly into training and validation cohort with a ratio of 9:1. In the training cohort, a light gradient boosting machine algorithm was used to develop the pre-model to detect VNT based on clinical data. A shapley value method was used to evaluate the importance of included variables according to pre-model. ML EGD was furthermore developed based on the most related variables to detect VNT using light gradient boosting machine algorithm. Then, we validated it in the validation cohort and tested it in the two external test cohorts.
Results: The main etiology of cirrhosis was hepatitis B infection in the training (68.02%), validation cohort (68.99%) and test cohort 1 (79.19%) and the main etiology in test cohort 2 was hepatitis C infection (47.16%). Liver stiffness, platelet count and total bilirubin were evaluated as the most related variables to detect VNT to develop ML EGD. By receiver operator characteristic curve, the most accurate cut-off to rule out patients with VNT was chosen as a ML EGD below 0.50 with a negative predictive value of 96.4%. In the training cohort, a ML EGD below 0.50 could spare 607 (52.6%) unnecessary EGD with a missed VNT rate of 3.6%. In the validation cohort, test cohort 1 and test cohort 2, a ML EGD score below 0.50 could spare 75 (58.1%), 506 (52.4%), 224 (41.1%) EGD with a missed VNT rate of 1.4%, 2.8%, and 3.1%, respectively. Comparing with Baveno VI criteria, ML EGD improved the proportion of avoided EGD (training cohort, 52.6% vs 29.4%; validation cohort, 58.1% vs 44.2%; test cohort 1, 52.4% vs 26.5%; test cohort 2, 41.1% vs 21.1%).
Conclusion: We developed a robust machine learning-based model, named ML EGD, with excellent performance to exclude VNT in patients with compensated cirrhosis.

OS015

Diagnostic performance of non-invasive liver fibrosis biomarkers: a bayesian individual patient data meta-analysis of hepatitis B cohorts in sub-saharan Africa (HEPSANET)

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Background and aims: In sub-Saharan Africa, hepatitis B is the principal cause of liver disease, and associated mortality is rising.