

Lorena del Carmen Notari³, Marina Agozino⁴, Jose Luis Fernandez⁴, Maria Margarita Anders⁵, Nadia Grigera⁵, Florencia Antinucci⁵, Orlando Orozco Ganem⁵, Maria Dolores Murga⁶, Daniea Perez⁶, Ana Palazzo⁶, Liria Martinez Rejtman⁷, Ivonne Giselle Duarte⁸, Julio Vorobioff⁹, Victoria Trevizan⁹, Sofia Bulaty⁹, Fernando Bessone⁹, José Daniel Bosia⁹, Silvia Mabel Borzi¹⁰, Teodoro E. Stieben¹¹, Adriano Masola¹¹, Sebastian Eduardo Ferretti¹², Diego Arufe¹³, Ezequiel Demirdjian¹³, Maria Pia Raffa¹³, Cintia Elizabet Vazquez¹⁴, Pablo Ruiz¹⁴, José Emanuel Martínez¹⁵, Hugo Fainboim¹⁶, Mirta Peralta¹⁶, Leandro Alfredo Heffner¹⁷, Andrea Odzak¹⁷, Melisa Dirchwolf¹⁸, Astrid Smud¹⁹, Manuel Mendizabal²⁰, Carla Bellizzi²¹, Diego Giunta²², Marcelo Valverde^{23,24}, Martin Elizondo^{23,24}, Ezequiel Mauro¹, Ana Martinez²¹, Jesica Tomatis¹⁸, Andres Bruno¹⁷, Agñel Ramos¹², Josefina Pages²⁰, Silvina Tevez⁴, Salvatore Piano²⁵, Adrian Gadano^{1,22}, Sebastián Marciano^{1,22}

¹ Hospital Italiano de Buenos Aires, Liver Unit, CABA, Argentina

² Clinica Chapelco, San Martín de los Andes, Argentina

³ Hospital Churrucá Visca, CABA, Argentina, San Martín de los Andes, Argentina

⁴ Sanatorio Güemes, CABA, Argentina

⁵ Hospital Aleman, CABA, Argentina

⁶ Hospital A.C. Padilla, San Miguel de Tucumán, Argentina

⁷ Hospital T J Schestakow, Mendoza, Argentina

⁸ Hospital 4 de Junio, Saenz Peña, Argentina

⁹ Hospital provincial del Centenario, Rosario, Argentina

¹⁰ Hospital Rossi, La Plata, Argentina

¹¹ Hospital San Martín, Paraná, Argentina

¹² Sanatorio Parque, Rosario, Argentina

¹³ Sanatorio Sagrado Corazón, CABA, Argentina

¹⁴ Hospital Regional de Río Gallegos, Río Gallegos, Argentina

¹⁵ Sanatorio Boratti, Posadas, Argentina

¹⁶ Hospital Muñiz, CABA, Argentina

¹⁷ Hospital Argerich, CABA, Argentina

¹⁸ Hospital Privado de Rosario, Rosario, Argentina

¹⁹ Hospital Italiano de Buenos Aires, Infectious Diseases Section, ABH, CABA, Argentina

²⁰ Hospital Universitario Austral, Pilar, Argentina

²¹ Hospital Fernández, CABA, Argentina

²² Hospital Italiano de Buenos Aires, Department of Research, CABA, Argentina

²³ Hospital de Clínicas, Montevideo, Uruguay

²⁴ Hospital Militar, Montevideo, Uruguay

²⁵ Unit of Internal Medicine and Hepatology, Department of Medicine, University of Padova, Padova, Italy

Background: Predicting short-term mortality in patients with cirrhosis and bacterial infections is challenging.

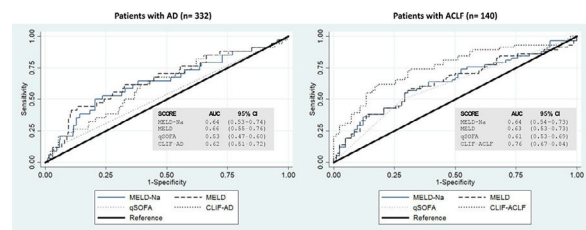
Aims: To compare the performance of various scores in predicting in-hospital mortality in this population.

Methods: We performed an analysis of the multicenter prospective cohort study of patients with cirrhosis with bacterial infections throughout Argentina and Uruguay (clinicaltrials.gov.NCT03919032). Patients were classified according to the CLIF criteria as having ACLF or mere acute decompensation (AD). We evaluated the performance of scores of liver disease and infection severity in predicting in-

hospital mortality. MELD, MELD-Na, and Quick SOFA (qSOFA) were computed in all patients. CLIF-AD was only computed in patients without ACLF, and CLIF-ACLF only in patients with ACLF. We plotted ROC curves and estimated their area under the curve (AUROC).

Results: We included 472 patients: 66% male, mean age 57 ± 12 years. Most frequent infections: SBP (30%) and urinary tract infection (25%). Overall, 332 (70%) patients had acute decompensation, and 140 (30%) ACLF. In-hospital mortality rate was 19%: 41% in patients with ACLF vs 10% in patients with AD (p<0.001). When we evaluated the AUROC of the entire cohort, MELD and MELD-Na performed similarly: 0.74 (95% CI 0.68-0.81) and 0.74 (95% CI 0.67-0.80), respectively; whereas qSOFA showed the lowest performance: 0.62 (95% CI 0.57-0.68). When evaluating only patients with ACLF, CLIF-ACLF performed significantly better than the other ones: AUROC 0.76 (95% CI 0.67-0.84, p =0.01). All scores performed poorly in patients with AD (Figure).

Conclusion: The best tool to predict in-hospital mortality in patients with infection-related ACLF was the CLIF-ACLF score. In patients with infection-related AD, all scores performed poorly. Evaluation of the scores performance is of paramount importance in different regions and for each complication of cirrhosis separately.



<https://doi.org/10.1016/j.aohep.2021.100496>

O-10 PRIMARY BILIARY CHOLANGITIS PATIENTS DIAGNOSED BY DIFFERENT COMBINATIONS OF THE DIAGNOSTIC CRITERIA PRESENT CLINICAL AND LABORATORY PECULIARITIES

Guilherme G.L. Cançado^{1,2}, Eduardo L.R. Cançado³, Maria L.G. Ferraz⁴, Cristiane A. Villela-Nogueira⁵, Debora R.B. Terrabuio³, Michelle H. Braga³, Mateus J. Nardelli¹, Luciana C. Faria¹, Nathalia M.F. GOMES⁴, ELZE M.G. Oliveira⁴, Vivian Rotman⁵, Maria Beatriz Oliveira⁶, Simone M.C.F. Cunha⁷, Daniel F. Mazo⁸, Liliana S.C. Mendes⁹, Claudia A.P. Ivantes¹⁰, Valéria Faborges^{11,12}, Fabio H.L. Pace¹³, Mario G. Pessoa³, Izabelle V. Signorelli¹⁴, Gabriela P. Coral¹⁵, Paulo L. Bittencourt^{16,17}, Cynthia Levy¹⁸, Cláudia A. Couto¹, Members of the Brazilian Cholestasis Study Group Consortium¹

¹ Hospital das Clínicas da Universidade Federal de Minas Gerais, Belo Horizonte, Brazil

² Hospital da Polícia Militar de Minas Gerais, Belo Horizonte, Brazil

³ Departamento de Gastroenterologia, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil

⁴ Disciplina de Gastroenterologia, Universidade Federal de São Paulo, São Paulo, Brazil

⁵ Hospital Universitário Clementino Fraga Filho e Departamento de Clínica Médica da Faculdade de

Medicina, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

⁶ Ambulatório Municipal de Hepatites Virais de São José dos Campos, São José dos Campos, Brazil

⁷ Hospital Universitário Professor Edgard Santos, Universidade Federal da Bahia, Salvador, Brazil

⁸ Divisão de Gastroenterologia (Gastrocentro), Faculdade de Ciências Médicas, Universidade Estadual de Campinas, Campinas, São Paulo, Brazil

⁹ Hospital de Base do Distrito Federal, Brasília, Brazil

¹⁰ Serviço de Gastroenterologia, Hepatologia e Transplante Hepático, Hospital Nossa Senhora das Graças, Curitiba, Brazil

¹¹ Instituto de Gastroenterologia, Endoscopia e Proctologia, Uberlândia, Brazil

¹² Universidade Federal de Uberlândia, Uberlândia, Brazil

¹³ Serviço de Gastroenterologia e Hepatologia, Universidade Federal de Juiz de Fora, Juiz de Fora, Minas Gerais, Brazil

¹⁴ Hospitals Universitário Cassiano Antônio Moraes, Universidade Federal do Espírito Santo, Vitória, Brazil

¹⁵ Irmandade da Santa Casa de Misericórdia de Porto Alegre, Porto Alegre, Brazil

¹⁶ Hospital Português, Salvador, Brazil

¹⁷ Escola Bahiana de Medicina e Saúde Pública

¹⁸ Division of Digestive Health and Liver Diseases, University of Miami Miller School of Medicine, Miami, Florida, United States of America

Introduction: Primary biliary cholangitis (PBC) diagnosis is based on international criteria, which requires two of the following: (i) elevated alkaline phosphatase (AP), (ii) anti-mitochondrial antibody (AMA) and (iii) liver biopsy (BX) suggestive of PBC. It is still unclear if patients diagnosed by different criteria combinations present peculiarities, especially in highly-admixed populations.

Objectives: To investigate if patients diagnosed with PBC by different combinations of validated criteria present clinical or laboratory particularities.

Methods: The Brazilian Cholestasis Study Group database was reviewed to compare clinical, biochemical and histological characteristics of PBC between four groups diagnosed by: (1) AP $\geq 2x$ upper limit of normality (ULN) + presence of AMA, (2) AP $\geq 2x$ ULN + BX suggestive of PBC, (3) presence of AMA + BX suggestive of PBC and (4) all criteria.

Results: 482 patients with PBC were included (Table 1). Group-1 presented with higher levels of IgG, lower frequency of arterial hypertension (AH) and lower response to ursodeoxycholic acid (UDCA), while Group-2 had lower: age at diagnosis and HDL-C levels. Group-3 had higher: age at diagnosis, frequency of neoplasms, AH and response to UDCA; and lower: frequency of pruritus and jaundice, levels of aminotransferases, GGT and bilirubin, advanced liver disease and esophageal varices. Group-4 showed higher frequency of symptoms at presentation, especially pruritus.

Conclusion: PBC patients diagnosed by different combinations of established criteria may present singular features that can possibly impact in disease presentation and progression.

Table
Comparison of PBC Features according to Different Combinations of Diagnostic Criteria

Variables	Diagnostic Criteria				P-value
	Elevated AP+ AMA positive	Elevated AP+ BX positive	AMA positive + BX positive	All criteria	
Female sex	72 (96.0)	36 (94.7)	56 (94.9)	96 (96.0)	0.954 ¹
Age (yr.)	63.1 ± 12.3	54.5 ± 13.9	63.9 ± 11.2	60.1 ± 11.3	0.001 ³
Age at diagnosis (yr.)	54.5 ± 13.9	48.6 ± 14.1*	57.6 ± 11.5*	52.3 ± 10.2	0.023 ³
Symptoms	54 (72.0)	26 (70.3)	25 (42.4)*	76 (76.0)*	< 0.001 ²
Pruritus	38 (50.7)	20 (54.1)	16 (27.1)*	63 (63.0)*	< 0.001 ²
Fatigue	27 (36.0)	17 (45.9)	15 (25.4)	42 (42.0)	0.155 ¹
Jaundice	15 (20.0)	12 (31.6)	5 (8.5)*	28 (28.0)	0.014 ²
	25 (33.3)	15 (39.5)	29 (49.2)	40 (40.0)	0.327 ²

(continued)

Table (Continued)

Variables	Diagnostic Criteria				P-value
	Elevated AP+ AMA positive	Elevated AP+ BX positive	AMA positive + BX positive	All criteria	
Extrahepatic manifestation					
Thyroiditis	12 (16.0)	6 (15.8)	16 (27.1)	19 (19.0)	0.374 ²
Rheumatoid Arthritis	4 (5.3)	2 (5.3)	4 (6.8)	3 (3.0)	0.676 ¹
Sjögren Syndrome	4 (5.3)	4 (10.5)	5 (8.5)	12 (12.0)	0.494 ²
Neoplasms	2 (2.7)	3 (7.9)	9 (15.5)*	6 (6.0)	0.046 ¹
Comorbidities					
Diabetes	11 (14.7)	7 (18.4)	5 (8.5)	11 (11.0)	0.454 ²
Arterial Hypertension	12 (16.0)*	10 (26.3)	22 (37.3)*	24 (24.0)	0.044 ²
Dyslipidemia	21 (28.0)	7 (18.9)	13 (22.0)	32 (35.1)	0.351 ²
Obesity	8 (10.7)	2 (5.3)	7 (11.9)	15 (15.2)	0.437 ²
Advanced Fibrosis	13 (44.8)	16 (48.5)	13 (23.6)*	41 (46.6)	0.030 ²
Laboratory					
AST/ULN	2.7 (1.8-3.6)	2.0 (1.5-3.5)	1.1 (0.8-1.6)	2.4 (1.6-4.4)	< 0.001 ⁴
ALT/ULN	2.4 (1.3-4.4)	2.4 (1.5-3.8)	1.3 (0.9-1.9)	2.4 (1.6-4.2)	< 0.001 ⁴
GGT/ULN	11.0 (5.8-21.7)	10.3 (5.8-17.9)	3.6 (1.7-7.9)	9.3 (5.1-15.8)	< 0.001 ⁴
Total bilirubin (mg/dL)	1.1 (0.7-2.1)	1.2 (0.7-2.0)	0.7 (0.5-1.0)	1.0 (0.6-1.7)	< 0.001 ⁴
Conjugated bilirubin (mg/dL)	0.7 (0.3-1.3)	0.6 (0.4-1.0)	0.3 (0.2-0.5)	0.5 (0.3-0.9)	< 0.001 ⁴
Albumin (g/dL)	4.0 (3.5-4.2)	3.9 (3.6-4.2)	4.0 (3.8-4.3)	3.9 (3.5-4.2)	0.059 ⁴
Platelets count (10 ⁹ /L)	205 (145-276)	191 (112-265)	230 (200-276)	220 (168-272)	0.110 ⁴
Total cholesterol (mg/dL)	224 (191-265)	220 (191-251)	207 (185-231)	216 (191-267)	0.242 ⁴
HDL-cholesterol (mg/dL)	65 (48-82)	45 (36-71)	57 (50-69)	62 (48-80)	0.012 ⁴
Triglycerides (mg/dL)	111 (82-141)	92 (60-135)	111 (87-136)	111 (78-165)	0.493 ⁴
ANA $\geq 1:40$	47 (66.2)	19 (52.8)	37 (71.2)	69 (70.4)	0.238 ²
ASMA $\geq 1:40$	4 (6.5)	2 (6.1)	2 (4.2)	4 (4.6)	0.907 ¹
IgG (mg/dL)	1702 (1344-1921)	1450 (1202-1755)	1421 (1218-1638)	1321 (1061-2248)	0.032 ⁴
IgM (mg/dL)	324 (210-478)	188 (123-387)	314 (191-454)	334 (205-438)	0.156 ⁴
Response Criteria					
Toronto	16 (40.0)*	11 (50.0)	24 (82.8)*	34 (52.3)	0.005 ²
Barcelona	30 (66.7)	19 (63.3)	18 (48.6)	48 (64.0)	0.344 ²
Paris-1	22 (48.9)	16 (55.2)	26 (70.3)	38 (50.7)	0.193 ²
Paris-2	9 (20.0)*	10 (34.5)	24 (64.9)*	21 (28.0)	< 0.001 ²
POISE Trial	29 (64.4)	18 (60.0)	24 (64.9)	46 (61.3)	0.963 ²
Rotterdam	27 (61.4)	12 (48.0)	22 (68.6)	37 (59.7)	0.465 ²
Outcomes					
Liver cirrhosis	29 (45.3)	17 (47.2)	12 (20.7)*	35 (35.4)	0.016 ²
Esophageal varices	27 (43.5)	14 (50.0)	10 (20.8)*	29 (36.3)	0.035 ²
Transplantation	8 (10.7)	4 (10.5)	1 (1.7)	6 (6.0)	0.138 ¹
Death	7 (14.9)	3 (9.4)	5 (11.1)	10 (12.7)	0.893 ²

AMA, anti-mitochondria autoantibody; ANA, anti-nuclear autoantibody; ASMA, anti-smooth muscle autoantibody; AP, alkaline phosphatase; AST, aspartate aminotransferase; ALT, alanine aminotransferase; BX, liver biopsy; HDL, high-density lipoprotein; IgG, immunoglobulin G; IgM, immunoglobulin M; ULN, upper limit of normality; Yr., years.*Variable associated with the statistically significant difference. ¹Fisher's test, ²Chi-square test, ³ANOVA, ⁴Kruskal-Wallis test.

<https://doi.org/10.1016/j.aohep.2021.100497>

O-11 REMODELING OF IMMUNOLOGICAL BIOMARKERS IN PATIENTS WITH CHRONIC HEPATITIS C TREATED WITH DIRECTACTING ANTIVIRAL THERAPY

Isabela Gomes Ribeiro^{1,2,3},
 Jordana Graziela Alves Coelho-Dos-Reis^{3,4},
 Jordana Rodrigues Barbosa Fradico³,
 Ismael Artur da Costa-Rocha³,
 Luciana Diniz Silva^{1,2,5}, Lucy Ana Santos Fonseca^{1,2},
 Rhaissa Carvalho Said Stanciolli^{1,2},
 Andréa Teixeira-Carvalho³,
 Olindo Assis Martins-Filho^{3,*}, Rosângela Teixeira^{1,2,5}

¹ Pós-graduação em Ciências Aplicadas da Saúde do Adulto, Faculdade de Medicina, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil

² Ambulatório de Hepatites Virais, Instituto Alfa de Gastroenterologia, Hospital das Clínicas/ Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil

³ Grupo Integrado de Pesquisa em Biomarcadores, Instituto René Rachou, Fundação Oswaldo Cruz – FIOCRUZ-Minas, Belo Horizonte, MG, Brazil

⁴ Laboratório de Virologia Básica e Aplicada, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil

⁵ Departamento de Clínica Médica, Faculdade de Medicina, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil