

A - ALF	Adrenal insufficiency (AI) median (range)	No adrenal insufficiency (No AI) median (range)	<i>p-value</i>
APACHE II score at baseline			
BL <387 nmol/L (CLIA)	13.5 (3-27)	20 (11-34)	0.04
BL <275 nmol/L (CLIA)	17 (9-21)	19 (3-34)	0.46
BL <414 nmol/L (CLIA)	14 (3-27)	20.5 (11-34)	0.02
peak cortisol <550 nmol/L (CLIA)	16 (12-20)	19 (3-34)	0.64
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	25 (11-27)	17 (3-34)	0.1
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	24.5 (24-25)	17 (3-34)	0.19
BL < 230 nmol/L (LC-MS)	9 (3-20)	18.5 (11-28)	0.059
BL <275 nmol/L (LC-MS)	16.5 (3-27)	20 (6-28)	0.56
BL <414 nmol/L (LC-MS)	14.5 (3-27)	20 (11-28)	0.13
SAPS II score at baseline			
BL <387 nmol/L (CLIA)	32 (9-55)	41 (19-69)	0.14
BL <275 nmol/L (CLIA)	44 (28-55)	37 (9-69)	0.42
BL <414 nmol/L (CLIA)	35.5 (9-63)	40.5 (24-69)	0.25
peak cortisol <550 nmol/L (CLIA)	33.5 (28-39)	40 (9-69)	0.56
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	63 (23-69)	37 (9-57)	0.03
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	66.5 (64-69)	38 (9-63)	0.005
BL < 230 nmol/L (LC-MS)	39 (20-55)	40 (23-63)	0.57
BL <275 nmol/L (LC-MS)	38 (23-38)	40 (20-50)	0.92
BL <414 nmol/L (LC-MS)	38 (20-63)	40 (24-50)	0.79
SOFA score at baseline			
BL <387 nmol/L (CLIA)	12 (8-16)	13.5 (10-18)	0.18
BL <275 nmol/L (CLIA)	14 (11-16)	12 (5-18)	0.45
BL <414 nmol/L (CLIA)	13 (5-17)	12.5 (10-18)	0.32
peak cortisol <550 nmol/L (CLIA)	15 (14-16)	13 (8-18)	0.37
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	16 (10-17)	12 (8-18)	0.12
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	15.5 (15-16)	12.5 (8-18)	0.24
BL < 230 nmol/L (LC-MS)	11 (8-16)	13 (10-17)	0.33
BL <275 nmol/L (LC-MS)	13 (10-17)	12 (8-16)	0.74
BL <414 nmol/L (LC-MS)	13 (8-17)	12 (10-16)	0.99
MELD score at baseline			
BL <387 nmol/L (CLIA)	38 (21-40)	40 (29-40)	0.16
BL <275 nmol/L (CLIA)	40 (37-40)	40 (21-40)	0.53
BL <414 nmol/L (CLIA)	39 (21-40)	40 (29-40)	0.38
peak cortisol <550 nmol/L (CLIA)	39.5 (39-40)	40 (21-40)	0.69
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	40 (38-40)	39 (21-40)	0.15
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	40 (40-40)	39.5 (21-40)	0.41
BL < 230 nmol/L (LC-MS)	37 (27-40)	38 (29-40)	0.40
BL <275 nmol/L (LC-MS)	38.5 (27-40)	33 (29-40)	0.22
BL < 414 nmol/L (LC-MS)	38 (27-40)	33 (29-40)	0.89

B - ACLF	Adrenal insufficiency (AI) median (range)	No adrenal insufficiency (No AI) median (range)	<i>p-value</i>
APACHE II score at baseline			
BL < 399 nmol/L (CLIA)	19.5 (9-27)	22.5 (16-35)	0.03
BL <275 nmol/L (CLIA)	21 (10-24)	22 (9-35)	0.25
BL <414 nmol/L (CLIA)	21 (9-35)	22.5 (16-35)	0.08
peak cortisol <550 nmol/L (CLIA)	18 (10-35)	22 (9-35)	0.37
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	23 (16-35)	22 (9-35)	0.43
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	26 (16-32)	22 (9-35)	0.18
BL < 250 nmol/L (LC-MS)	18.5 (9-24)	23 (16-35)	0.02
BL <275 nmol/L (LC-MS)	22 (9-27)	22 (16-35)	0.1
BL <414 nmol/L (LC-MS)	22 (9-35)	24 (16-35)	0.18
SAPS II score at baseline			
BL < 399 nmol/L (CLIA)	26.5 (13-54)	38.5 (15-50)	0.01
BL <275 nmol/L (CLIA)	26 (21-36)	36 (13-54)	0.08
BL <414 nmol/L (CLIA)	27.5 (13-54)	40 (15-50)	0.006
peak cortisol <550 nmol/L (CLIA)	22 (13-44)	36 (15-54)	0.04
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	36 (13-50)	33 (21-54)	0.5
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	40 (15-50)	31 (13-54)	0.44
BL < 250 nmol/L (LC-MS)	22.5 (13-36)	37 (15-50)	0.003
BL <275 nmol/L (LC-MS)	25 (13-36)	37 (15-50)	0.003
BL <414 nmol/L (LC-MS)	28 (13-50)	37 (15-47)	0.37
SOFA score at baseline			
BL < 399 nmol/L (CLIA)	12 (9-17)	13 (10-19)	0.45
BL <275 nmol/L (CLIA)	12 (9-13)	13 (10-19)	0.17
BL <414 nmol/L (CLIA)	12 (9-17)	13 (10-19)	0.42
peak cortisol <550 nmol/L (CLIA)	12 (10-17)	13 (9-19)	0.74
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	13 (10-17)	13 (9-19)	0.78
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	13 (10-13)	13 (9-19)	0.51
BL < 250 nmol/L (LC-MS)	12 (9-17)	13 (10-19)	0.28
BL <275 nmol/L (LC-MS)	12.5 (9-17)	13 (10-19)	0.72
BL <414 nmol/L (LC-MS)	13 (9-18)	12.5 (10-19)	0.74
MELD score at baseline			
BL < 399 nmol/L (CLIA)	22 (12-40)	33 (12-40)	0.051
BL <275 nmol/L (CLIA)	24 (17-40)	30.5 (12-40)	0.58
BL <414 nmol/L (CLIA)	24.5 (12-40)	31 (12-40)	0.38
peak cortisol <550 nmol/L (CLIA)	29 (12-40)	28.5 (12-40)	0.73
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	34 (12-40)	26 (12-39)	0.02
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	35 (26-40)	26 (12-40)	0.03
BL < 250 nmol/L (LC-MS)	24 (12-40)	31.5 (12-40)	0.26
BL <275 nmol/L (LC-MS)	21 (12-40)	33 (12-40)	0.12
BL <414 nmol/L (LC-MS)	25.5 (12-40)	33 (12-40)	0.53

CLIF-SOFA score at baseline			
BL < 399 nmol/L (CLIA)	11 (7-15)	13 (8-19)	0.055
BL <275 nmol/L (CLIA)	10 (9-13)	13 (7-19)	0.09
BL <414 nmol/L (CLIA)	12 (7-17)	13 (8-19)	0.11
peak cortisol <550 nmol/L (CLIA)	12.5 (10-17)	13 (7-19)	0.73
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	14 (10-19)	12 (7-17)	0.03
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	17 (12-19)	12 (7-17)	0.006
BL < 250 nmol/L (LC-MS)	10 (9-13)	13.5 (7-19)	0.11
BL <275 nmol/L (LC-MS)	10 (8-13)	14 (7-19)	0.02
BL < 450 nmol/L (LC-MS)	12 (7-19)	14 (8-19)	0.14
NACSELD-OF score at baseline			
BL < 399 nmol/L (CLIA)	1 (0-3)	2 (0-4)	0.10
BL <275 nmol/L (CLIA)	1 (0-2)	2 (0-4)	0.10
BL <414 nmol/L (CLIA)	1 (0-3)	2 (0-4)	0.09
peak cortisol <550 nmol/L (CLIA)	1 (1-3)	2 (0-4)	0.25
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	1 (0-4)	1.5 (0-3)	0.36
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	3 (0-4)	1 (0-3)	0.08
BL < 250 nmol/L (LC-MS)	1 (0-2)	2 (0-4)	0.04
BL <275 nmol/L (LC-MS)	1 (0-2)	2 (0-4)	0.01
BL <414 nmol/L (LC-MS)	1 (0-4)	2 (0-4)	0.85
Child Pugh score at baseline			
BL < 399 nmol/L (CLIA)	12 (10-14)	12 (10-15)	0.99
BL <275 nmol/L (CLIA)	13 (10-14)	12 (10-15)	0.51
BL <414 nmol/L (CLIA)	12.5 (10-15)	12 (10-15)	0.53
peak cortisol <550 nmol/L (CLIA)	13 (10-15)	12 (10-15)	0.35
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	12 (10-15)	12 (10-14)	0.38
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	12 (10-15)	12 (10-15)	0.36
BL < 250 nmol/L (LC-MS)	13 (10-14)	12 (10-15)	0.61
BL <275 nmol/L (LC-MS)	12.5 (10-14)	12 (10-15)	0.76
BL <414 nmol/L (LC-MS)	12 (10-15)	12 (10-15)	0.90

C stable cirrhosis	Adrenal insufficiency (AI)	No adrenal insufficiency (No AI)	<i>p-value</i>
	median (range)	median (range)	
MELD score at baseline			
BL < 399 nmol/L (CLIA)	16 (7-20)	11 (7-15)	0.36
BL <275 nmol/L (CLIA)	7	16 (7-20)	-
BL <414 nmol/L (CLIA)	16 (7-20)	11 (7-15)	0.36
peak cortisol <550 nmol/L (CLIA)	7	16 (7-20)	-
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	11.5 (7-16)	15.5 (7-20)	0.68
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	7	16 (7-20)	-
BL < 250 nmol/L (LC-MS)	16 (7-20)	11 (7-15)	0.43
BL <275 nmol/L (LC-MS)	14.5 (7-20)	11 (7-15)	0.6
BL <414 nmol/L (LC-MS)	14.5 (7-20)	11 (7-15)	0.6

CLIF-SOFA score at baseline			
BL < 399 nmol/L (CLIA)	5 (2-7)	2.5 (1-4)	0.25
BL <275 nmol/L (CLIA)	3	5 (1-7)	-
BL <414 nmol/L (CLIA)	5 (2-7)	2.5 (1-4)	0.25
peak cortisol <550 nmol/L (CLIA)	3	5 (1-7)	-
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	1.5 (1-2)	5 (3-7)	0.07
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	1	5 (2-7)	-
BL < 250 nmol/L (LC-MS)	5 (2-7)	2.5 (1-4)	0.25
BL <275 nmol/L (LC-MS)	5.5 (3-7)	2.5 (1-4)	0.27
BL < 450 nmol/L (LC-MS)	5.5 (3-7)	2.5 (1-4)	0.27
NACSELD-OF score at baseline			
BL < 399 nmol/L (CLIA)	0 (0-1)	0 (0-0)	>0.99
BL <275 nmol/L (CLIA)	1	0 (0-1)	-
BL <414 nmol/L (CLIA)	0 (0-1)	0 (0-0)	>0.99
peak cortisol <550 nmol/L (CLIA)	1	0 (0-1)	-
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	0 (0-0)	0 (0-1)	>0.99
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	0	0 (0-1)	-
BL < 250 nmol/L (LC-MS)	0 (0-1)	0 (0-0)	>0.99
BL <275 nmol/L (LC-MS)	0.5 (0-1)	0 (0-0)	0.47
BL <414 nmol/L (LC-MS)	0.5 (0-1)	0 (0-0)	0.47
Child Pugh score at baseline			
BL < 399 nmol/L (CLIA)	9.5 (6-11)	8 (8-8)	0.21
BL <275 nmol/L (CLIA)	6	9 (8-11)	-
BL <414 nmol/L (CLIA)	9.5 (6-11)	8 (8-8)	0.21
peak cortisol <550 nmol/L (CLIA)	6	9 (8-11)	-
Δ <250 nmol/L + BL >275 nmol/L (CLIA)	8.5 (8-9)	9.5 (6-11)	0.61
Δ <250 nmol/L + BL >414 nmol/L (CLIA)	8	9 (6-11)	-
BL < 250 nmol/L (LC-MS)	10 (6-11)	8 (8-8)	0.33
BL <275 nmol/L (LC-MS)	9.5 (6-11)	8 (8-8)	0.47
BL <414 nmol/L (LC-MS)	9 (6-11)	8 (8-8)	0.40

ACLF: acute-on-chronic liver failure , ALF: acute liver failure, APACHE II: acute physiology and chronic health disease classification system II, BL: Baseline cortisol, Δ : delta, CLIF-SOFA score: chronic liver failure-sequential organ failure assessment, GC: glucocorticoid, LCMS: Liquid chromatography-mass spectrometry, MELD: model for end-stage liver disease, NACSELD: North American Consortium for the Study of End-Stage Liver Disease, SAPS II: simplified acute physiology score II, SOFA: sequential organ failure assessment