

## **Supplemental Figure Legends.**

**Supplemental Fig. 1. Change in ROTEM parameters over time according to maximal encephalopathy grade.** Maximal HE grade refers to the highest grade over the first 7 days of study admission; “0” HE refers to patients with ALI. Individual cells display the median and IQR values for the parameter on that day. Shading (light green to red) indicates the proportion of subjects with an abnormal ROTEM parameter for that day compared to reference values. HE, hepatic encephalopathy, CT, clotting time; CFT, clot formation time; alpha, alpha angle; MCF, maximal clot firmness.

**Supplemental Fig. 2. Change in ROTEM parameters over time according to renal replacement therapy.** RRT refers to the need for at least one application of renal replacement therapy over the first 7 days of study admission. Individual cells display the median and IQR values for the parameter on that day. Shading (light green to red) indicates the proportion of subjects with an abnormal ROTEM parameter for that day compared to reference values. RRT, renal replacement therapy, CT, clotting time; CFT, clot formation time; alpha, alpha angle; MCF, maximal clot firmness.

	Admission	Day 2	Day 3	Day 4	Day 5
CT	86 (73,102)	80 (66,100)	79 (63,93)	73 (62,88)	72 (60,88)
CT	188 (170,208)	178 (156,208)	179 (158,202)	172 (158,192)	174 (162,214)
CFT	100 (72,150)	103 (80,169)	102 (72,156)	99 (76,149)	100 (70,140)
CFT	99 (74,158)	101 (73,167)	97 (68,146)	93 (69,130)	99 (68,143)
Alpha	71 (64,76)	72 (63,76)	72 (63,77)	71 (65,76)	72 (66,76)
Alpha	71 (62,76)	73 (64,76)	72 (65,77)	72 (68,76)	72 (66,76)
MCF	57 (50,61)	54 (48,61)	55 (47,61)	55 (48,61)	56 (49,64)
MCF	53 (48,60)	52 (46,58)	54 (46,59)	55 (47,59)	54 (47,61)
MCF	14 (9,18)	15 (10,19)	17 (10,21)	16 (11,21)	17 (12,22)

Maximum HE Grade 0-2

	Admission	Day 2	Day 3	Day 4	Day 5
CT	106 (84,140)	85 (76,110)	82 (71,108)	77 (59,112)	78 (66,117)
CT	207 (177,263)	202 (174,221)	195 (173,223)	185 (169,234)	209 (178,247)
CFT	119 (88,213)	120 (87,207)	134 (82,256)	150 (108,274)	184 (114,290)
CFT	106 (82,199)	142 (81,216)	130 (79,212)	134 (109,276)	190 (110,314)
Alpha	70 (61,76)	68 (59,74)	68 (47,76)	68 (52,72)	67 (51,72)
Alpha	70 (59,75)	66 (57,74)	66 (54,75)	68 (56,73)	62 (49,70)
MCF	53 (46,60)	52 (45,60)	51 (40,59)	47 (38,54)	46 (42,53)
MCF	51 (44,60)	49 (44,58)	50 (42,56)	48 (39,53)	46 (41,53)
MCF	11 (6,16)	13 (9,17)	13 (9,20)	13 (9,16)	13 (10,18)

Maximum HE Grade 3-4

Supplemental Figure 1

	Admission	Day 2	Day 3	Day 4	Day 5
FIBTEM	86 (74,102)	78 (68,98)	77 (63,92)	73 (60,89)	72 (61,88)
EXTEM	187 (170,208)	176 (156,208)	176 (157,203)	173 (158,197)	176 (162,220)
INTEM	100 (71,141)	102 (80,169)	98 (71,152)	98 (74,144)	109 (74,138)
CT	97 (72,156)	93 (73,163)	92 (65,135)	94 (68,127)	103 (69,136)
Alpha	71 (66,76)	73 (64,75)	73 (65,77)	71 (65,76)	70 (66,76)
MCF	72 (64,76)	73 (64,76)	72 (66,78)	73 (68,76)	72 (66,76)
MCF	57 (50,62)	54 (48,61)	55 (48,62)	55 (48,61)	56 (49,62)
MCF	53 (48,61)	53 (46,59)	54 (47,59)	54 (47,60)	54 (47,61)
MCF	14 (9,18)	14 (9,19)	17 (10,21)	16 (11,21)	17 (12,21)

No RRT

	Admission	Day 2	Day 3	Day 4	Day 5
FIBTEM	112 (85,146)	96 (80,116)	91 (74,122)	78 (67,104)	78 (68,113)
EXTEM	215 (191,269)	204 (187,220)	201 (184,226)	185 (170,227)	206 (178,245)
INTEM	133 (98,225)	168 (116,213)	176 (133,312)	199 (114,294)	194 (106,272)
CT	136 (97,229)	176 (122,227)	180 (128,248)	156 (116,252)	194 (122,296)
Alpha	67 (52,71)	66 (58,70)	63 (39,68)	62 (51,73)	65 (50,73)
MCF	66 (53,72)	63 (54,69)	62 (54,68)	64 (55,72)	60 (50,68)
MCF	50 (44,56)	48 (45,58)	47 (40,54)	46 (37,54)	46 (42,54)
MCF	51 (43,57)	47 (41,56)	46 (42,52)	48 (40,53)	46 (40,52)
MCF	10 (6,14)	12 (10,17)	13 (9,16)	14 (10,16)	13 (10,18)

RRT

Supplemental Figure 2

ROTEM Reaction	ROTEM Parameter (units)	Normal Range	N	Etiology of ALI/ALF		P
				Non-APAP N=97	APAP N=102	
<b>EXTEM</b>	CT (sec)	43-82	161	88 ± 39	85 ± 33	0.23
	CFT (sec)	48-127	157	110 ± 102	100 ± 90	0.30
	α-angle (degrees)	65-80	160	70 ± 11	72 ± 13	0.26
	A10 (mm)	NA	160	45 ± 17	48 ± 17	0.14
	MCF (mm)	52-70	160	54 ± 13	56 ± 14	0.10
<b>INTEM</b>	CT (sec)	122-208	163	203 ± 68	183 ± 42	<0.001
	CFT (sec)	45-110	159	113 ± 108	97 ± 87	0.05
	α-angle (degrees)	70-81	162	70 ± 13	73 ± 12	0.02
	A10 (mm)	NA	162	44 ± 16	47 ± 15	0.05
	MCF (mm)	51-72	162	51 ± 12	54 ± 12	0.06
<b>FIBTEM</b>	MCF (mm)	7-24	165	12 ± 10	13 ± 10	0.11

**Supplemental Table 1. Admission ROTEM parameters according to etiology of ALI/ALF.**

APAP, acetaminophen; non-APAP, non-acetaminophen; CT, clotting time; CFT, clot formation time; A10, amplitude at 10 minutes; MCF, maximal clot firmness; NA, not available (normal range not established).

ROTEM Reaction	ROTEM Parameter (units)	Normal Range	N	Maximum Hepatic Encephalopathy		P
				Grade 0-2 N = 133	Grade 3/4 N = 65	
<b>EXTEM</b>	CT (sec)	43-82	160	85 ± 30	101 ± 56	0.03
	CFT (sec)	48-127	156	101 ± 79	117 ± 136	0.09
	α-angle (degrees)	65-80	159	71 ± 12	71 ± 12	0.29
	A10 (mm)	NA	159	48 ± 15	44 ± 17	0.03
	MCF (mm)	52-70	159	56 ± 12	54 ± 14	0.14
<b>INTEM</b>	CT (sec)	122-208	162	188 ± 40	200 ± 79	0.01
	CFT (sec)	45-110	158	102 ± 83	124 ± 152	0.12
	α-angle (degrees)	70-81	161	71 ± 12	69 ± 18	0.10
	A10 (mm)	NA	161	46 ± 15	42 ± 19	0.07
	MCF (mm)	51-72	161	53 ± 13	51 ± 16	0.59
<b>FIBTEM</b>	MCF (mm)	7-24	164	13 ± 9	11 ± 10	0.08

**Supplemental Table 2. Admission ROTEM parameters according to maximum grade of hepatic encephalopathy reached during days 1-7.**

CT, clotting time; CFT, clot formation time; A10, amplitude at 10 minutes; MCF, maximal clot firmness; NA, not available (normal range not established).

ROTEM Reaction	ROTEM Parameter (units)	Normal Range	N	Renal Replacement Therapy		P
				No N = 152	Yes N = 48	
<b>EXTEM</b>	CT (sec)	43-82	161	84 ± 29	109 ± 66	<0.001
	CFT (sec)	48-127	157	101 ± 71	133 ± 118	0.01
	α-angle (degrees)	65-80	160	72 ± 9	67 ± 20	0.004
	A10 (mm)	NA	160	47 ± 15	41 ± 17	0.01
	MCF (mm)	52-70	160	56 ± 12	51 ± 15	0.04
<b>INTEM</b>	CT (sec)	122-208	163	188 ± 41	211 ± 82	0.002
	CFT (sec)	45-110	159	99 ± 89	136 ± 137	0.07
	α-angle (degrees)	70-81	162	72 ± 12	66 ± 20	0.02
	A10 (mm)	NA	162	46 ± 16	41 ± 16	0.02
	MCF (mm)	51-72	162	53 ± 12	51 ± 14	0.12
<b>FIBTEM</b>	MCF (mm)	7-24	165	14 ± 9	11 ± 9	0.04

**Supplemental Table 3. Admission ROTEM parameters according to receipt of renal replacement therapy during days 1-7.**

CT, clotting time; CFT, clot formation time; A10, amplitude at 10 minutes; MCF, maximal clot firmness; NA, not available (normal range not established).

ROTEM Reaction	ROTEM Parameter (units)	Normal Range	N	Bleeding		P
				Absent N = 181	Present N = 18	
<b>EXTEM</b>	CT (sec)	43-82	161	86 ± 36	93 ± 35	0.50
	CFT (sec)	48-127	157	104 ± 86	112 ± 141	0.63
	α-angle (degrees)	65-80	160	71 ± 12	70 ± 22	0.65
	A10 (mm)	NA	160	47 ± 17	45 ± 24	0.82
	MCF (mm)	52-70	160	55 ± 14	55 ± 18	0.99
<b>INTEM</b>	CT (sec)	122-208	163	192 ± 43	201 ± 37	0.21
	CFT (sec)	45-110	159	105 ± 95	124 ± 163	0.72
	α-angle (degrees)	70-81	162	71 ± 13	69 ± 25	0.73
	A10 (mm)	NA	162	44 ± 16	43 ± 24	0.83
	MCF (mm)	51-72	162	52 ± 13	55 ± 17	0.73
<b>FIBTEM</b>	MCF (mm)	7-24	165	13 ± 10	11 ± 15	0.90

**Supplemental Table 4. Admission ROTEM parameters according to bleeding events during days 1-7.**

CT, clotting time; CFT, clot formation time; A10, amplitude at 10 minutes; MCF, maximal clot firmness; LT, liver transplantation; TFS, transplant-free survival; NA, not available (normal range not established).

ROTEM Reaction	ROTEM Parameter (units)	Normal Range	N	21 Day Outcome		P
				LT/Death N=59	TFS N=132	
<b>EXTEM</b>	CT (sec)	43-82	155	104 ± 62	84 ± 30	0.005
	CFT (sec)	48-127	151	113 ± 80	102 ± 90	0.35
	α-angle (degrees)	65-80	154	71 ± 11	71 ± 12	0.65
	A10 (mm)	NA	154	43 ± 14	48 ± 16	0.05
	MCF (mm)	52-70	154	51 ± 13	56 ± 13	0.09
<b>INTEM</b>	CT (sec)	122-208	157	214 ± 82	187 ± 37	<0.001
	CFT (sec)	45-110	153	110 ± 115	104 ± 99	0.24
	α-angle (degrees)	70-81	156	70 ± 19	71 ± 12	0.09
	A10 (mm)	NA	156	43 ± 15	47 ± 16	0.05
	MCF (mm)	51-72	156	49 ± 12	53 ± 14	0.20
<b>FIBTEM</b>	MCF (mm)	7-24	159	10 ± 10	13 ± 8	0.004

**Supplemental Table 5. Admission ROTEM parameters according to 21-day outcome.**

CT, clotting time; CFT, clot formation time; A10, amplitude at 10 minutes; MCF, maximal clot firmness; LT, liver transplantation; TFS, transplant-free survival; NA, not available (normal range not established).