Online Supplemental Data

Table 1. Baseline, imaging, and clinical outcome characteristics of the MR CLEAN-NO IV CTP with follow-up imaging subgroup compared to the overall MR CLEAN-NO IV trial cohort. ASPECTS, Alberta Stroke Program Early CT Score; CTA-CS; Computed Tomography Angiography Collateral Score; CTP, Computed Tomography Perfusion; ICA, internal carotid artery; ICA-T, internal carotid artery terminus; IVT, IV alteplase; IQR, interquartile range; mAOL, modified arterial occlusive lesion; mRS, modified Rankin Score; NIHSS, National Institute of Health Stroke Scale; sICH, symptomatic intracranial hemorrhage. If the [known in] number is not shown, the variable was known for all patients.

Baseline characteristics	CTP with FU imaging population – IVT and EVT subgroup (n=81)	CTP with FU imaging population – EVT alone (n=64)	Overall CTP with FU imaging substudy population (n=145)	Overall MR CLEAN-NO IV population (n=539)
Age (yr) – median(IQR)	71(61-78)	70(61-78)	70(61-78)	71(62-79)
Female – n(%)	31(38)	25(39)	56(39)	234(43)
Baseline NIHSS – median(IQR)	16(9-20)	15(11-19)	16(10-20)	16(10-20)
IVT administered – n yes(%)	81(100)	0(0)	81(56)	285(53)
Onset-to-imaging time (min) – median(IQR) [known in]	68(60-102)	67(48-88)	67(52-101) [n=91]	67(53-89) [n=170]
Onset-to-groin time (min) – median (IQR) [known in]	137(106-168)	140(111-180)	138(107-174) [n=140]	133(105-180) [n=511]
Onset-to-needle time (min) – median (IQR) [known in]	99(77-139) [n=73]	NA	99(77-139) [n=73]	100(75-157) [n=260]
Imaging characteristics				
Occlusion location on baseline CTA – n(%)				
ICA	0(0)	0(0)	0(0)	4(1)
ICA-T	16(20)	22(34)	38(26)	114(21)
M1	49(61)	29(45)	78(54)	330(61)
M2	16(20)	12(19)	28(19)	85(16)
Other	0(0)	1(2)	1(1)	5(1)
ASPECTS – median(IQR)	9(8-10)	9(8-10)	9(8-10)	9(8-10)
CTA-CS – n(%) [known in]	[n=77]	[n=64]	[n=141]	[n=526]
0	6(8)	4(6)	10(7)	32(6)
1	22(29)	11(17)	33(23)	152(29)
2	32(42)	33(52)	65(45)	223(42)

3	17(22)	16(25)	33(23)	119(23)
Baseline ischemic core volume on CTP (mL) – median(IQR)	17(4-35)	11(6-24)	14(4-33)	13(5-35) [n=223]
Baseline penumbra volume on CTP (mL) – median(IQR)	114(79-157)	106(82-142)	111(80-150)	114(78-149) [n=223]
eTICI – n(%) [known in]	[n=73]	[n=60]	[n=133]	[n=480]
0	7(10)	2(3)	9(7)	36(8)
1	2(3)	1(2)	3(2)	6(1)
2a	5(7)	4(7)	9(7)	50(10)
2b	18(25)	20(33)	38(29)	109(23)
2c	9(12)	6(10)	15(11)	59(12)
3	32(44)	27(45)	59(44)	220(46)
mAOL at 24h follow-up imaging – n(%) [known in]	[n=73]	[n=59]	[n=132]	[n=422]
0	4(6)	8(14)	12(9)	35(8)
1	3(4)	1(2)	4(3)	8(2)
2	4(6)	7(12)	11(8)	36(9)
3	62(85)	43(73)	105(80)	343(81)
Procedural and clinical outcome characteristics				
First line stent retriever – n(%) [known in]	57(83)	46(78)	103(81)	371(78) [n=474]
Number of retrieval attempts – median(IQR)	2(2-3)	2(2-4)	2(2-3)	2(2-3)
Infarct evolution (mL) – median(IQR)	0.3 (-6.0; 26.2)	1.8 (-5.7; 22.9)	1.3 (-5.7; 25.4)	N/A
Poor functional outcome (mRS 5-6)– n(%)	16(20)	13(20)	29(20)	153(28)
Functional independence (mRS 0-2)– n(%)	45(56)	37(58)	82(57)	270(50)
Mortality at 90 days – n(%)	10(12)	9(14)	19(13)	98(18)
sICH – n(%)	0(0)	0(0)	0(0)	1(0)

Appendix B

Sensitivity analysis of patients with 24h follow-up DWI and CT imaging

One hundred and four of 145 (72%) patients received 24h follow-up imaging. Of those, 67/145 (46%) patients received a follow-up DWI at median 27 (IQR 23-40) hours. Thirty-seven (26%) patients received follow-up CT imaging at median 24 (IQR 18-25) hours. Baseline characteristics were comparable to the overall study population. Median CTP ischemic core volume was 12 (IQR 4-29) mL. Median FIV was 11 (IQR 3-41) mL. Substantial infarct growth occurred in 15/57 (26%) patients who received IVT prior to EVT (median lesion evolution -1 [IQR -9; 14] mL) vs. in 17/47 (36%) patients who underwent EVT alone (median lesion evolution 1 [IQR -6; 20] mL, $p=0.3$). Patients with 24h DWI had similar rates of successful reperfusion (51/67 [76%]) compared to patients with follow-up CT at 24h (28/37 [76%]) and follow-up CT at 1 week (33/41 [80%]). In addition, the infarct evolution was comparable between patients with 24h DWI (median 1 mL) and 24h CT (median -1 mL). Patients with 1-week CT did show significantly different infarct evolution (median infarct growth 13 mL) compared to patients with 24h CT- or DWI imaging ($p=0.02$).

Sensitivity analysis of patients with tandem lesions

Nineteen (13%) patients had a tandem lesion on baseline CTA. Eight (42%) patients with a tandem lesion received IVT prior to EVT. Patients with a tandem lesion had a longer median onset-to-groin time (175 minutes) compared to patients without tandem lesions (135 min) ($p<0.001$). All other baseline characteristics were similar. Infarct growth occurred in 5/8 (63%) tandem lesion patients who received IVT prior to EVT versus 5/11 (46%) patients with EVT alone ($p=0.5$).

Appendix B

Online Table I

Supplemental Table I. Univariable analysis of substantial infarct growth (>10 mL). ASPECTS, Alberta Stroke Program Early CT Score; CI, Confidence Interval; CTA; Computed Tomography Angiography; IVT, intravenous alteplase; mRS, modified Rankin Scale; N, number of patients included in analysis; OR, Odds Ratio.

Characteristic	N	OR	95% CI	p-value	q-value[*]
IVT administration	145	0.69	0.35, 1.35	0.27	0.31
ASPECTS	145	0.84	0.68, 1.04	0.10	0.15
CTA collateral score	**141**	**0.59**	**0.39, 0.89**	**0.011**	**0.033**
Onset-to-reperfusion time (min)	145	1.00	1.00, 1.01	0.31	0.31
eTICI score	133	0.80	0.63, 1.02	0.067	0.12
Reocclusion	**132**	**3.70**	**1.28, 11.6**	**0.016**	**0.036**
Occlusion location	145	1.36	0.84, 2.24	0.22	0.28
Total attempts during EVT	**145**	**1.49**	**1.18, 1.92**	**<0.001**	**0.002**
Any hemorrhage	**145**	**6.96**	**3.21, 15.8**	**<0.001**	**<0.001**

[*] False discovery rate correction for multiple testing

Online Table II

Supplemental Table II. Multivariable analysis of substantial infarct growth (>10 mL).
ASPECTS, Alberta Stroke Program Early CT Score; CI, Confidence Interval; CTA; Computed Tomography Angiography; IVT, intravenous alteplase; OR, Odds Ratio.

Characteristic	OR	95% CI	p-value
IVT administration	0.46	0.17, 1.21	0.12
ASPECTS	0.82	0.61, 1.13	0.2
CTA collateral score	**0.42**	**0.22, 0.77**	**0.006**
Onset-to-reperfusion time (min)	1.00	0.99, 1.01	0.7
eTICI score	0.85	0.58, 1.25	0.4
Reocclusion	**2.49**	**1.24, 5.32**	**0.013**
Occlusion location	1.48	0.28, 7.83	0.6
Total attempts during EVT	**1.48**	**1.06, 2.14**	**0.026**
Any hemorrhage	**6.23**	**2.30, 18.4**	**<0.001**