

## Supplementary Data

### Additional methodological details

#### Finger Plethysmography

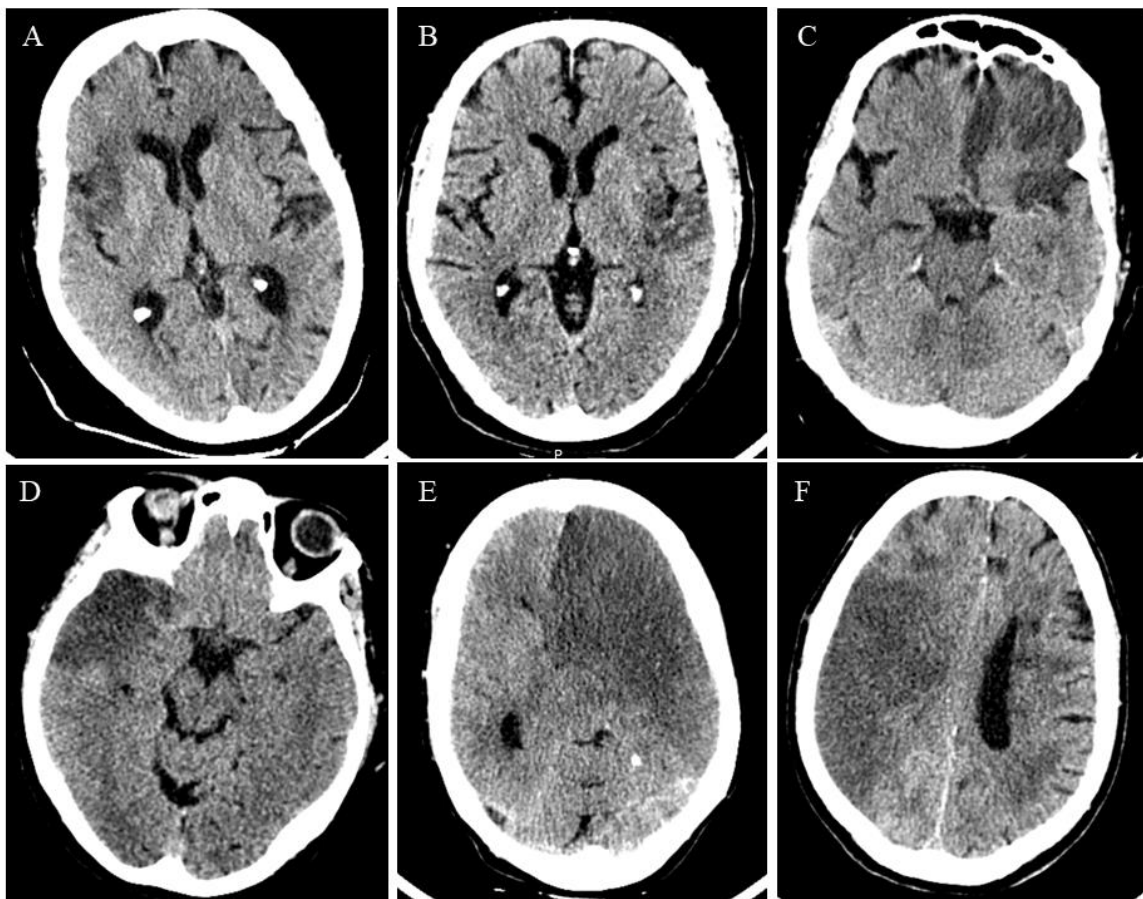
Beat-to-beat Blood Pressure Variability was assessed with Finometer (Finapres Medical Systems, the Netherlands). This was done after a period of 10 to 20 min of resting in supine position over 5 minutes. Stroke unit and Neurocritical Intensive Care are set at ambient temperature ~22°C. Limitation of the acute stage of stroke is the fact that the control of post-prandial period and vasoactive substances refrain are not possible. A 3-lead continuous ECG was continuously co-registered with noninvasive beat-to-beat BP. Data was acquired at sampling rate of 200 Hz in a Powerlab 8/30 with LabChart Pro software 7.1 (ADInstruments). Non-affected arm was preferred, namely in middle finger. A warmed pad was used beneath the hand when the body temperature was not ideal and interfering with signal caption. Finometer device has a built-in automated calibration (Physiocal) and after waveforms stabilization it turned off during the 5-min period of registry. BP pressures were calibrated offline by the oscillometric brachial readings on the contralateral arm, performed immediately before the monitoring period. Hand and finger could be massaged and re-warmed if needed. Medium-cuff was used more frequently but small and large sizes were also available. Other fingers were used if waveforms were more reliable at the investigator experience.<sup>12,13</sup>

#### Statistical Analysis

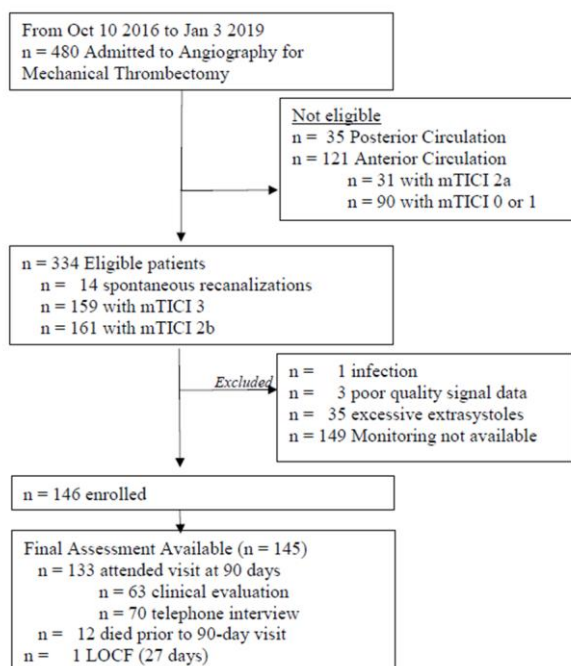
Baseline characteristics of included subjects were summarized by means and standard deviations (SD) for normally distributed continuous variables, medians and interquartile ranges (IQR) for skewed continuous variables, and numbers (%) for categorical variables. We used Chi-square or Fisher's exact tests for categorical variables and Student's t/Mann-Whitney tests for continuous variables to test for differences between groups. Bonferroni correction was used when categorical variables had more than one class. Associations of BP variability with early neurologic recovery and functional outcome were assessed using binary and ordinal logistic regression. The analyses were adjusted using two models: in model 1, we adjusted for universal confounders age and sex as well as all independent variables associated with the outcome after backward stepwise multivariate logistic regression analysis, i.e., NIHSS, time from last-seen-well to recanalization and the ASPECTS (Supplemental Table 1). In model 2, we adjusted for variables associated with BP parameters, i.e., occlusion locus, glycemia, previous use of angiotensin conversion enzyme inhibitor or receptor blocker, and respiratory frequency (Supplemental Table 2). Systolic Blood pressure was introduced in the models in measures of variability. We used logarithmic transformations of non-normally distributed continuous variables.

The predictive performance of BP variability parameters for unfavorable outcome was analyzed via area under the receiver operating characteristic (ROC) curve. Sensitivity analyses were performed for variables that could affect BP variability. Considering that atrial fibrillation increases BP variability and can interfere with spectral analysis, we pre-specified a subgroup analysis comparing patients with and without atrial fibrillation. Other subgroups included those with and without hypertension, young versus old (dichotomized at the median age of 70), and early ( $\leq 300$  min from last seen well) versus delayed recanalization. ( $> 300$  min from last seen well) We generated forest plots and logistic regression models testing for heterogeneity between those subgroups. All statistical analyses were performed with SPSS Statistics for Windows (Version 25, IBM Corp.). Statistical significance was inferred at  $p < 0.05$ .

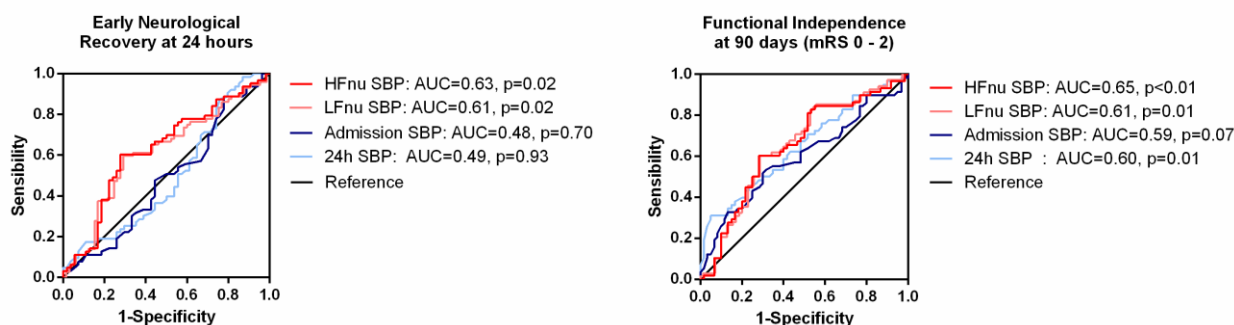
**Supplemental Figure I** Template chart of strategic lesions affecting the central autonomic network areas assessed from the 24-hour CT. Figure legends: A – Right anterior insular cortex; B – Left posterior insular cortex; C – Frontobasal cortex; D – Amygdala efferent pathways; E – diencephalic midline shift; F –Cingulate cortex



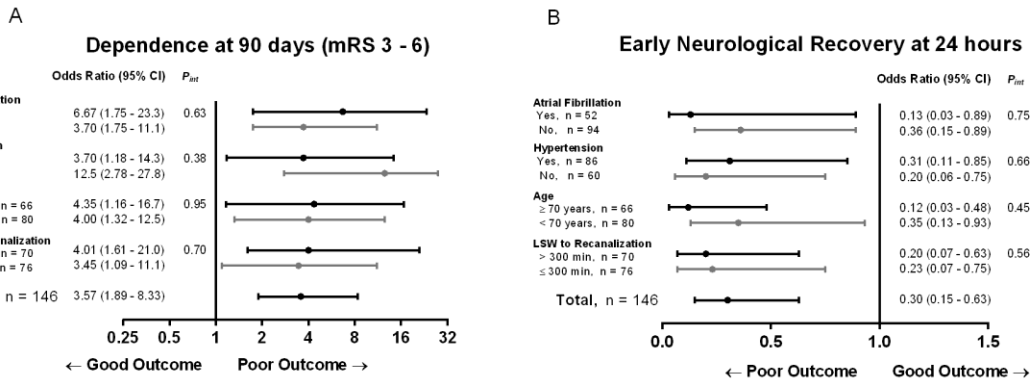
**Figure II: Flow chart of the study's recruitment.** LOCF = last observation carried forward; mTICI = modified Thrombolysis in Cerebral Infarction; NICU = neurocritical care unit



**Supplemental Figure III** Receiver operating characteristic (ROC) curves generated for Early Neurological Recovery at 24 hours, and functional independence at 90 days (modified Rankin Scale 0 – 2) for the systolic blood pressure (SBP) parameters: admission and 24-h averaged values, and for very short-term SBP variability normalized spectral powers at low (LFnu) and (HFnu) frequencies. mRS = Modified Rankin Scale.



**Supplemental Figure IV** Forest plots showing adjusted effect for high or low values very short term systolic blood pressure variability (HFnu) for (A) poor functional outcome at 90 days (mRS 3-6); and (B) early neurological recovery at 24 hours in pre-specified subgroups with P values for heterogeneity across subgroups. Odds ratio are adjusted to age, sex, National Institutes of Health Stroke Scale, and the Alberta Stroke Program Early CT score. LSW = time of last seen well.



**Supplemental table I** Demographic, clinical and radiological characteristics of all patients and the differences between patient subgroups based on functional outcome at 90 days and early neurological recovery. Characteristics of excluded patients also shown.

	Included (n = 146)					Excluded (n = 188)
	All (n = 146)	Independent mRS 0-2 (n = 63)	Dependent mRS 3-6 (n = 58)	Early neuro recovery Yes (n = 59)	Early neuro recovery No (n = 58)	
Age, years – mean (SD)	68 (14)	64 (14)	74 (13)* <sup>a</sup>	67 (14)	69 (14)	66 (13)
Male sex – n (%)	67 (46)	34 (47)	33 (45)	39 (51)	28 (41)	81 (43)
Hypertension – n (%)	86 (59)	37 (51)	49 (66)	41 (53)	44 (65)	120 (64)
Diabetes mellitus – n (%)	29 (20)	15 (21)	14 (19)	15 (20)	13 (19)	46 (24)
Dyslipidemia – n (%)	77 (58)	39 (54)	38 (51)	43 (56)	33 (49)	93 (49)
Smoker – n (%)	30 (21)	16 (22)	14 (19)	15 (20)	15 (22)	44 (23)
Obesity – n (%)	16 (17)	12 (23)	4 (10)	11 (23)	5 (11)	39 (21)
Atrial Fibrillation – n (%)	52 (36)	24 (33)	28 (38)	26 (34)	25 (37)	80 (42)
Ischemic Heart Disease – n (%)	14 (10)	6 (8)	8 (11)	6 (8)	8 (12)	32 (22)
Heart Failure – n (%)	20 (14)	12 (17)	8 (11)	13 (17)	7 (10)	28 (15)
Chronic medication – n						
Statin	69 (47)	33 (46)	36 (49)	37 (48)	31 (46)	77 (41)
Antiplatelet	51 (35)	24 (33)	27 (37)	28 (36)	23 (34)	56 (30)
Anticoagulant	21 (14)	8 (11)	13 (18)	14 (18)	6 (9)	21 (11)
Antihypertensive	88 (60)	43 (60)	45 (61)	45 (58)	42 (62)	109 (58)
Beta-blockers	57 (42)	31 (46)	26 (37)	27 (37)	29 (46)	85 (45)
Calcium-channel blockers	19 (14)	8 (12)	11 (16)	7 (10)	11 (18)	19 (10)
ACEI/ARB	46 (34)	21 (31)	25 (36)	23 (32)	22 (35)	45 (24)
Glucose, mg/dL – median	123 (107 – 148)	117 (102 – 148)	127 (111 – 155)	121 (104 – 150)	126 (110 – 150)	119 (99 – 163)
Heart Rate, bpm	70 (62 – 82)	71 (62 – 82)	68 (61 – 82)	69 (60 – 81)	71 (64 – 86)	73 (62 – 85)
Respiratory Rate, bpm – median	17 (15 – 20)	18 (15 – 20)	17 (15–20)	18 (15 – 21)	17 (15 – 20)	18 (15 – 21)
TOAST Classification – n						
Large Artery	25 (17)	14 (19)	11 (15)	13 (17)	12 (18)	19 (10)
Cardioembolism	72 (49)	32 (44)	40 (54)	36 (47)	35 (52)	102 (54)
Undetermined	40 (27)	19 (26)	21 (28)	24 (31)	16 (24)	60 (32)
Other (Carotid)	9 (6)	7 (10)	2 (3)	4 (5)	5 (7)	8 (4)
Baseline NIHSS – median	15 (9 – 19)	12 (6 – 15)	18 (14 – 21)* <sup>a</sup>	15 (10 – 20)	14 (8 – 18)	16 (6 – 18)
Occlusion site – n (%)						
Terminal ICA	19 (14)	8 (12)	11 (16)	9 (12)	10 (16)	17 (9)
M1	99 (72)	49 (73)	50 (71)	56 (77)	42 (67)	150 (80)
M2	19 (14)	10 (15)	9 (13)	8 (11)	11 (18)	21 (11)
ASPECTS – median	9 (8 – 10)	10 (8 – 10)	9 (7 – 10)	10 (8 – 10)	9 (7 – 10)	9 (7 – 10)*
Collateral grade – median	2 (2 – 3)	2 (2 – 3)	2 (1 – 3)	2 (2 – 3)	2 (2 – 3)	2 (2 – 3)
IV Thrombolysis – n (%)	74 (51)	39 (54)	35 (47)	41 (53)	33 (49)	105 (56)
Grade 3 in mTICI scale – n (%)	71 (49)	37 (51)	34 (46)	38 (49)	32 (47)	83 (44)
Significant intracranial hemorrhage	9 (6)	1 (1)	8 (11)* <sup>a</sup>	1 (1)	8 (12)	4 (2)*
LSW to Recanalization	299 (101 – 399)	300 (123 – 399)	258 (85 – 420)	245 (78 – 361)	340 (110 – 399)	356 (145 – 478)* <sup>a</sup>

Abbreviations: ACEI = Angiotensin Converting-Enzyme Inhibitor; ARB = Angiotensin Receptor Blocker; ASPECTS = The Alberta Stroke Program Early Computed Tomography Score (ASPECTS); BP = blood pressure; ICA = internal carotid artery; IQR = interquartile range; LSW = last-seen-well time; M1 = main trunk of the middle cerebral artery; M2 = first-order branch of the main trunk of the middle cerebral artery; mTICI = modified Thrombolysis in Cerebral Infarction; NIHSS = Scores on the National Institutes of Health Stroke Scale; SD = standard deviation; TOAST = Trial of Org 10172 in Acute Stroke Treatment.

\* P<0.05 values are shown for differences between clinical outcome subgroups or included versus included patients obtained from chi-square test/ Fisher's exact test for categorical variables, or Student's t/Mann-Whitney test for continuous variables. Multiple comparisons were adjusted by Bonferroni method.

<sup>a</sup> Remained significantly (p<0.05) after backward conditional logistic regression.

**Supplemental Table II** Linear regression analysis exploring the relationship of baseline characteristics and BP parameters

Admission systolic BP, mm Hg	p	24-h Systolic BP, mm Hg	p	LF power, nu	p	HF power, nu	p	LF/HF ratio	p
------------------------------	---	-------------------------	---	--------------	---	--------------	---	-------------	---

			Beta (CI 95%)		Beta (CI 95%)		Beta (CI 95%)		Beta (CI 95%)	
Age, years	0.16 (-0.10 – 0.43)	0.22	0.21 (0.03 – 0.39)	0.03	-0.004 (-0.01–0.002)	0.20	0.01 (-0.003–0.01)	0.19	-0.01 (-0.02–0.004)	0.17
Male sex	-6.72 (-0.14 – 0.55)	0.07	-5.0 (-10.1 – 0.08)	0.05	-0.02 (-0.19 – 0.16)	0.87	-0.14 (-0.39 – 0.10)	0.25	0.13 (-0.27 – 0.53)	0.53
Prev. Stroke/TIA	1.64 (-8.54 – 11.8)	0.75	4.84 (-2.11 – 11.8)	0.17	0.28 (-0.13 – 0.69)	0.18	0.24 (-0.10 – 0.57)	0.17	-0.43 (-0.98 – 0.12)	0.12
IHD	-0.21 (-12.9 – 12.5)	0.97	5.97 (-2.68 – 14.6)	0.18	0.04 (-0.46 – 0.55)	0.86	-0.01 (-0.44 – 0.42)	0.96	0.05 (-0.65 – 0.75)	0.89
Heart Failure	-3.83 (-15.0 – 7.34)	0.50	-4.99 (-12.3 – 2.34)	0.18	-0.10 (-0.36 – 0.16)	0.47	0.09 (-0.27 – 0.46)	0.62	-0.19 (-0.78 – 0.40)	0.53
Atrial Fibrillation	-3.03 (-10.5 – 4.41)	0.42	2.80 (-2.37 – 7.98)	0.29	-0.19 (-0.36 – -0.01)	0.04	0.33 (0.09 – 0.58)	<0.01	-0.52 (-0.92 – -0.12)	0.01
Hypertension	1.79 (-5.66 – 9.24)	0.64	3.64 (-1.54 – 8.81)	0.17	-0.18 (-0.36 – 0.00)	0.05	0.04 (-0.21 – 0.29)	0.76	-0.22 (-0.62 – 0.19)	0.29
Diabetes mellitus	-0.20 (-9.13 – 8.74)	0.97	3.09 (-3.40 – 9.57)	0.35	-0.21 (-0.42 – 0.01)	0.06	0.15 (-0.15 – 0.46)	0.33	-0.36 (-0.85 – 0.14)	0.15
Dyslipidemia	-4.21 (-11.5 – 3.09)	0.26	-0.10 (-5.20 – 4.99)	0.97	0.05 (-0.13 – 0.22)	0.60	-0.04 (-0.28 – 0.21)	0.77	0.09 (-0.32 – 0.48)	0.68
Obesity	-1.97 (-14.7 – 10.7)	0.76	5.50 (-3.35 – 14.4)	0.22	0.03 (-0.23 – 0.29)	0.83	0.08 (-0.29 – 0.45)	0.67	-0.05 (-0.65 – 0.54)	0.86
Smoker	-0.92 (-10.6 – 8.81)	0.85	-2.26 (-8.93 – 4.42)	0.51	-0.16 (-0.39 – 0.07)	0.18	0.07 (-0.25 – 0.39)	0.65	-0.23 (-0.75 – 0.29)	0.38
Statin	0.02 (-0.22 – 0.27)	0.85	0.86 (-4.24 – 5.95)	0.74	0.02 (-0.22 – 0.27)	0.85	0.02 (-0.22 – 0.27)	0.85	0.02 (-0.22 – 0.27)	0.85
Antiplatelet	-0.19 (-0.46 – 0.08)	0.17	-1.11 (-6.62 – 4.40)	0.69	-0.19 (-0.46 – 0.08)	0.17	-0.19 (-0.46 – 0.08)	0.17	-0.19 (-0.46 – 0.08)	0.17
Anticoagulant	1.43 (-8.44 – 11.3)	0.78	6.17 (-0.65 – 13.0)	0.08	0.01 (-0.23 – 0.25)	0.91	0.12 (-0.22 – 0.45)	0.49	-0.10 (-0.64 – 0.44)	0.71
Antihypertensive	-0.90 (-8.42 – 6.61)	0.81	2.14 (-3.10 – 7.38)	0.42	-0.20 (-0.38 – -0.02)	0.03	0.14 (-0.12 – 0.39)	0.29	-0.33 (-0.74 – 0.07)	0.11
Beta-blocker	-0.81 (-7.78 – 7.62)	0.98	2.75 (-2.38 – 7.89)	0.29	-0.04 (-0.23 – 0.14)	0.64	0.10 (-0.14 – 0.34)	0.41	-0.14 (-0.54 – 0.26)	0.48
ACEI/ARB	-2.53 (-10.5 – 5.44)	0.53	3.41 (-1.97 – 8.78)	0.21	<b>-0.33 (-0.52 – -.15)</b>	<b>&lt;.01<sup>a</sup></b>	<b>0.26 (0.02 – 0.51)</b>	<b>0.04<sup>a</sup></b>	<b>-0.60 (-1.00 – -0.19)</b>	<b>0.01<sup>a</sup></b>
CCB	1.41 (-9.12 – 11.9)	0.79	2.34 (-4.65 – 9.32)	0.51	-0.23 (-0.48 – 0.02)	0.08	0.35 (0.03 – 0.67)	0.03	-0.58 (-1.11 – -0.04)	0.04
Glucose, mg	-0.06 (-0.15 – 0.03)	0.19	0.04 (-0.03 – 0.10)	0.25	<b>-0.002 (-0.01–0.00)</b>	<b>0.04<sup>a</sup></b>	<b>0.003 (0.00 – 0.01)</b>	<b>0.06<sup>a</sup></b>	<b>-0.01 (-0.01 – 0.00)</b>	<b>0.04<sup>a</sup></b>
RF, cycles/minute	0.72 (-0.163 – 1.61)	0.11	-0.16 (-0.78 – 0.46)	0.61	<b>0.03 (0.01 – 0.05)</b>	<b>0.01<sup>a</sup></b>	<b>-0.04 (-0.07 – -0.01)</b>	<b>0.02<sup>a</sup></b>	<b>0.07 (0.02 – 0.12)</b>	<b>0.01<sup>a</sup></b>
TOAST	0.083 (-4.58 – 4.75)	0.97	-0.31 (-3.65 – 3.03)	0.86	0.04 (-0.07 – 0.15)	0.46	0.05 (-0.11 – 0.20)	0.56	-0.004 (-0.26 – 0.25)	0.98
NIHSS baseline	-0.32 (-0.91 – 0.26)	0.28	0.08 (-0.32 – 0.48)	0.70	-0.01 (-0.03 – 0.00)	0.05	0.01 (-0.01 – 0.03)	0.42	-0.02 (-0.05 – 0.01)	0.17
HR, bpm	-0.01 (-0.02 – 0.00)	0.19	0.17 (0.001 – 0.34)	0.05	0.0 (0.00 – 0.00)	0.89	0.00 (0.00 – 0.00)	0.67	0.00 (0.00 – 0.00)	0.84
Occlusion site	<b>11.8 (4.53 – 19.1)</b>	<b>&lt;.01<sup>a</sup></b>	<b>6.45 (1.46 – 11.43)</b>	<b>.01<sup>a</sup></b>	0.004 (-0.18 – 0.19)	0.97	0.04 (-0.20 – 0.27)	0.74	-0.04 (-0.43 – 0.36)	0.86
ASPECTS Score	-0.75 (-3.03 – 1.54)	0.52	0.37 (-1.21 – 1.94)	0.64	-0.02 (-0.07 – 0.04)	0.49	-0.01 (-0.08 – 0.07)	0.84	-0.01 (-0.14 – 0.11)	0.85
Collateral grade	-0.55 (-6.47 – 5.36)	0.85	-1.52 (-5.12 – 2.09)	0.41	0.09 (-0.05 – 0.23)	0.22	-0.13 (-0.30 – 0.05)	0.16	0.21 (-0.09 – 0.51)	0.16
IV Thrombolysis	-0.48 (-7.80 – 6.84)	0.90	-3.07 (-8.18 – 2.05)	0.24	0.11 (-0.07 – 0.28)	0.24	-0.16 (-0.40 – 0.09)	0.20	0.27 (-0.13 – 0.66)	0.19
mTICI (2b vs 3)	-1.27 (-7.96 – 5.42)	0.71	0.99 (-3.56 – 5.55)	0.67	0.10 (-0.06 – 0.25)	0.24	-0.08 (-0.30 – 0.14)	0.47	0.18 (-0.18 – 0.53)	0.33
LSW to Rec.,hours	0.01 (0.00 – 0.02)	0.03	0.00 (-0.01 – 0.01)	0.83	0.00 (0.00 – 0.00)	0.40	0.00 (0.00 – 0.00)	0.83	0.00 (0.00 – 0.00)	0.61
Admission systolic BP, mmHg	-	-	-	-	0.00 (-0.004–0.004)	0.85	-0.001 (-0.01–0.01)	0.76	0.001 (-0.01 – 0.01)	0.91
24-h Averaged systolic BP, mmHg	-	-	-	-	0.00 (-0.01–0.01)	0.97	-0.001 (-0.01–0.01)	0.81	0.001 (-0.01 – 0.01)	0.90
SD of Systolic BP, mm Hg	-	-	-	-	-0.05 (-0.03–0.02)	0.61	0.01 (-0.02–0.03)	0.48	-0.01 (-0.06 – 0.03)	0.57

Abbreviations: ACEI = Angiotensin Converting-Enzyme Inhibitor; ARB = Angiotensin Receptor Blocker; ASPECTS = The Alberta Stroke Program Early Computed Tomography Score (ASPECTS); BP = blood pressure; CCB = Calcium-channel Blocker; ICA = internal carotid artery; IHD = Ischemic Heart Disease; IQR = interquartile range; LSW = last-seen-well time; M1 = main trunk of the middle cerebral artery; M2 = first-order branch of the main trunk of the middle cerebral artery; mTICI = modified Thrombolysis in Cerebral Infarction; NIHSS = Scores on the National Institutes of Health Stroke Scale; nu = normalized units; SD = standard deviation; HF and LF = High and low frequency powers of BP; Rec. = recanalization; RF = Respiratory Frequency; TOAST = Trial of Org 10172 in Acute Stroke. Beta coefficients (95% CI) and P values were calculated by univariate linear regression for BP parameters with each brain are parameter as independent variables.

<sup>a</sup> Remained significantly associated (p<0.05) after backward stepwise multivariate linear regression (highlighted in bold).

**Supplemental Table III** Univariate and multivariate logistic regression analysis for predicting outcome from BP parameters

Outcome measures	mRS 3 – 6 at 90 days – n (%)			Early neurological recovery at 24 hours – n (%)		
	Univariate Model	*Multivariate Model 1	†Multivariate Model 2	Univariate Model	*Multivariate Model 1	†Multivariate Model 2
	Unadjusted Odds ratio (CI 95%); P value	Adjusted Odds ratio (CI 95%); P value	Adjusted Odds ratio (CI 95%); P value	Unadjusted Odds ratio (CI 95%); P value	Adjusted Odds ratio (CI 95%); P value	Adjusted Odds ratio (CI 95%); P value
<i>All (n=146)</i>						
<b>Admission Systolic BP, mm Hg</b>	1.02 (1.002 – 1.03); p = 0.03	1.02 (1.01 – 1.04); p < 0.01	1.02 (1.001 – 1.04); p = 0.02	1.00 (0.98 – 1.01); p = 0.53	1.00 (0.98 – 1.01); p = 0.49	1.00(0.98– 1.01); p = 0.65
<b>24-h averaged Systolic BP, mm Hg</b>	1.04 (1.02 – 1.06); p < 0.01	1.04 (1.02 – 1.08); p < 0.01	1.04 (1.02 – 1.08); p < 0.01	0.99 (0.97 – 1.01); p = 0.41	1.00 (0.97 – 1.01); p = 0.28	0.99 (0.97– 1.01); p = 0.42
<b>24-h SD of Systolic BP, mm Hg</b>	1.03 (0.96 – 1.11); p = 0.33	1.03 (0.90 – 1.11); p = 0.79	1.01 (0.92 – 1.12); p = 0.55	0.93 (0.86 – 1.01); p = 0.06	0.91 (0.80 – 1.01); p = 0.36	0.90 (0.76– 1.14); p = 0.23

<b>LF spectral power, nu</b>	0.39 (0.21 – 0.74); p < 0.01	0.43 (0.23 – 0.79); p = 0.02	0.62 (0.45 – 0.93); p = 0.02	1.48 (1.05 – 2.08); p = 0.02	1.463 (1.07 – 2.20); p = 0.02	1.62 (1.12 – 2.56); p = 0.02
<b>HF spectral power, nu</b>	1.69 (1.04 – 2.70); p = 0.03	1.86 (1.07 – 3.25); p = 0.03	1.64 (1.08 – 2.50); p = 0.02	0.68 (0.48 – 0.949); p = 0.02	0.62 (0.44 – 0.91); p = 0.01	0.62 (0.37 – 0.91); p = 0.02
<b>LF/HF ratio</b>	0.68 (0.52 – 0.91) p < 0.01	0.67 (0.46 – 0.92) p = 0.02	0.70 (0.44 – 0.99) p = 0.05	1.30 (0.99 – 1.71) p = 0.06	1.37 (1.02 – 1.87) p = 0.04	1.42 (1.01 – 1.99) p = 0.05

Abbreviations: AF = Atrial fibrillation; CI = confidence interval; nu = normalized units; HF and LF = High and low frequencies; SD = Standard deviation

\* Model 1 = age + sex + NIHSS+ time of last-seen-well to recanalization +ASPECTS + mTICI+ Systolic blood pressure.

† Model 2 = angiotensin conversion enzyme inhibitor/receptor blocker + respiratory frequency+ glycemia + occlusion locus + Systolic blood pressure.

Odds ratio and CI obtained by logistic regression analysis

**Supplemental Table IV** Univariate and multivariate logistic regression analysis for predicting radiological outcomes

Outcomes Parameters	Cerebral Edema with MLS				Any Hemorrhagic transformation				SICH			
	Yes n = 28 (19%)	No n = 118 (81%)	OR (CI 95%); p	aOR (CI 95%); p	Yes n = 48 (33%)	No n = 98 (67%)	OR (CI 95%); p	aOR (CI 95%); p	Yes n = 9 (6 %)	No n = 137 (94%)	OR (CI 95%); p	aOR (CI 95%); p
<i>Admission</i>												
<b>Systolic BP, mm Hg – mean (SD)</b>	140 (13)	141 (26)	0.99 (0.99 – 1.01); p = 0.94	0.99 (0.99 – 1.01); p = 0.94	138 (17)	142 (27)	0.99 (0.98 – 1.01); p = 0.35	0.99 (0.99 – 1.01); p = 0.94	145 (18)	141 (24)	1.01 (0.97 – 1.024); p = 0.62	N.C.
<b>Diastolic BP, mm Hg – mean (SD)</b>	79 (13)	77 (21)	1.01 (0.98 – 1.02); p = 0.68	1.01 (0.98 – 1.02); p = 0.68	79 (15)	76 (21)	0.99 (0.98 – 1.01); p = 0.35	0.99 (0.99 – 1.02); p = 0.65	75 (14)	74 (20)	0.99 (0.96 – 1.03); p = 0.66	N.C.
<i>24-hour monitoring</i>												
<b>Averaged Systolic BP, mm Hg – mean (SD)</b>	128 (15)	124 (16)	1.01 (0.99 – 1.04) p = 0.38	1.03 (0.99 – 1.06) p = 0.15	126 (16)	125 (15)	1.01 (0.99 – 1.03); p = 0.40	1.01 (0.99 – 1.04); p = 0.40	129 (12)	125 (16)	0.71 (0.82 – 1.04); p = 0.72	N.C.
<b>SD of Systolic BP, mm Hg – median (IQR)</b>	14 (10 – 17)	13 (10 – 16)	1.02 (0.94 – 1.11) p = 0.68	1.06 (0.94 – 1.17) p = 0.30	13 (10 – 16)	14 (10 – 16)	0.97 (0.90 – 1.05); p = 0.42	0.96 (0.90 – 1.04); p = 0.40	13 (10 – 16)	13 (10 – 16)	0.97 (0.85 – 1.13); p = 0.71	N.C.
<b>Averaged Diastolic BP, mm Hg – mean (SD)</b>	70 (11)	67 (11)	1.02 (0.98 – 1.06) p = 0.45	1.02 (0.98 – 1.06) p = 0.56	70 (10)	67 (11)	1.02 (0.99 – 1.05); p = 0.31	0.96 (0.98 – 1.06); p = 0.34	71 (11)	68 (11)	0.99 (0.98 – 1.01); p = 0.57	N.C.
<b>SD of Diastolic BP, mm Hg – median (IQR)</b>	11 (8 – 13)	9 (7 – 12)	0.37 (0.95 – 1.12) p = 0.37	1.16 (1.01 – 1.37) p = 0.41	9 (8 – 12)	9 (7 – 12)	1.02 (0.92 – 1.13); p = 0.71	0.96 (0.98 – 1.06); p = 0.34	9 (7 – 13)	9 (7 – 12)	0.97 (0.96 – 1.01); p = 0.34	N.C.
<i>Very Short-term systolic BP variability (5 min)</i>												
<b>Total spectral power, mm Hg<sup>2</sup> – median (IQR)</b>	44.3 (30.3 – 82.3)	45.2 (18.3 – 77.2)	1.00 (0.99 – 1.01); p = 0.97	1.01 (0.99 – 1.01); p = 0.71	57.5 (28.3 – 89.1)	38.8 (18.3 – 81.0)	1.001 (0.99 – 1.01); p = 0.31	1.002 (0.997 – 1.01); p = 0.47	47.3 (21.3 – 72.3)	44.3 (21.0 – 70.3)	1.01 (0.99 – 1.01); p = 0.46	N.C.
<b>VLF power, mm Hg<sup>2</sup> – median (IQR)</b>	25.6 (17.2 – 37.5)	18.6 (9.20 – 42.0)	0.84 (0.99 – 1.01); p = 0.84	1.01 (0.99 – 1.01); p = 0.99	27.6 (18.2 – 44.5)	15.6 (8.2 – 39.5)	1.002 (0.99 – 1.01); p = 0.65	1.002 (0.99 – 1.07); p = 0.47	35.6 (18.2 – 44.5)	18.6 (9.2 – 40.5)	1.002 (0.99 – 1.07); p = 0.47	N.C.
<b>LF power, mm Hg<sup>2</sup> – median (IQR)</b>	6.9 (3.0 – 13.4)	7.1 (3.8 – 19.5)	0.99 (0.92 – 1.14); p = 0.94	1.01 (0.98 – 1.02); p = 0.56	9.1 (3.9 – 19.4)	7.1 (3.5 – 17.4)	1.001 (0.98 – 1.02); p = 0.99	1.01 (0.99 – 1.02); p = 0.66	9.0 (3.5 – 14.4)	7.0 (3.4 – 18.4)	1.01 (0.99 – 1.02); p = 0.66	N.C.
<b>HF power, mm Hg<sup>2</sup> – median (IQR)</b>	6.2 (3.2 – 24.8)	5.0 (2.1 – 17.4)	1.04 (0.99 – 1.02); p = 0.44	1.02 (0.998 – 1.03); p = 0.08	6.7 (2.1 – 26.8)	5.7 (2.5 – 16.4)	1.01 (0.998 – 1.02); p = 0.11	1.01 (0.997 – 1.03); p = 0.17	5.7 (3.0 – 14.8)	5.6 (2.9 – 13.8)	1.003 (0.998 – 1.01); p = 0.35	N.C.
<b>LF spectral power, nu – mean (SD)</b>	<b>0.45 (0.25)</b>	<b>0.54 (0.25)</b>	<b>0.30 (0.13 – 1.01); p = 0.04</b>	0.16 (0.02 – 1.01); p = 0.06	0.49 (0.25)	0.54 (0.25)	0.76 (0.18 – 3.27); p = 0.71	0.95 (0.18 – 4.97); p = 0.97	0.53 (0.30)	0.59 (0.27)	0.85 (0.04 – 16.9); p = 0.97	N.C.
<b>HF spectral power, nu – mean (SD)</b>	<b>0.55 (0.25)</b>	<b>0.45 (0.19)</b>	<b>1.01 (0.99 – 1.01); p = 0.04</b>	<b>5.87 (1.01 – 44); p = 0.04</b>	0.51 (0.24)	0.45 (0.22)	1.31 (0.31 – 5.69); p = 0.71	1.21 (0.25 – 5.75); p = 0.81	0.46 (0.16)	0.48 (0.26)	1.18 (0.26 – 26.6); p = 0.93	N.C.
<b>LF/HF ratio – median (IQR)</b>	0.83 (0.41 – 1.3)	1.17 (0.48 – 3.5)	0.85 (0.65 – 1.04); p = 0.11	0.79 (0.64 – 1.03); p = 0.09	0.98 (0.41 – 2.1)	1.17 (0.48 – 2.8)	0.98 (0.93 – 1.03); p = 0.49	0.92 (0.73 – 1.32); p = 0.92	1.20 (0.46 – 2.7)	1.17 (0.51 – 2.5)	0.80 (0.49 – 1.32); p = 0.46	N.C.

Absolute values of BP parameters are presented as median (interquartile range).

Abbreviations: CI = confidence interval; nu = normalized units; HF and LF = High and low frequencies; N.C. = not computed due to low number of outcome events (n = 8), OR = Odds ratio; aOR = adjusted OR to age, the National Institutes of Health Stroke Scale (NIHSS), and the Alberta Stroke Program Early Computed Tomography Score (ASPECTS). OR, CI and p values were obtained by logistic regression analysis to predict outcome

**Supplemental Table V** Relationship between BP parameters and specific regions of the brain related to central autonomic network.

Brain area	Ad. SBP	p	24-h SBP	p	LF spectral power, nu	p	HF spectral power, nu	p	LF/HF ratio	p	
	N (%)	Mean (SD)	Mean (SD)		Median (IQR)		Median (IQR)		Median (IQR)		
<b>Hemisphere side</b>											
<b>Right</b>	68 (47)	140 (22)	0.86	126 (15)	0.85	0.52 (0.30 – 0.77)	0.90	0.48 (0.23 – 0.70)	0.90	1.10 (0.42 – 3.38)	0.90
<b>Left</b>	78 (53)	142 (25)		125 (18)		0.52 (0.34 – 0.73)		0.48 (0.27 – 0.66)		1.10 (0.48 – 2.66)	
<b>Right Anterior Insular cortex</b>											
<b>Yes</b>	52 (36)	137 (21)	0.15	125 (15)	0.97	0.49 (0.34 – 0.70)	0.97	0.51 (0.30 – 0.66)	0.97	0.96 (0.51 – 2.29)	0.97
<b>No</b>	94 (64)	144 (25)		125 (17)		0.53 (0.30 – 0.76)		0.47 (0.24 – 0.70)		1.12 (0.43 – 3.17)	
<b>Left Posterior Insular cortex</b>											
<b>Yes</b>	40 (27)	141 (25)	0.76	126 (18)	0.73	0.53 (0.29 – 0.68)	0.44	0.47 (0.32 – 0.71)	0.44	1.12 (0.40 – 2.13)	0.44
<b>No</b>	106 (73)	141 (24)		125 (16)		0.51 (0.32 – 0.77)		0.49 (0.23 – 0.68)		1.06 (0.48 – 3.37)	
<b>Cingulate Cortex</b>											
<b>Yes</b>	24 (16)	146 (22)	0.87	126 (17)	0.87	0.46 (0.27 – 0.73)	0.34	0.54 (0.27 – 0.73)	0.34	0.84 (0.38 – 2.78)	0.34
<b>No</b>	122 (84)	140 (24)		125 (16)		0.52 (0.33 – 0.73)		0.48 (0.27 – 0.67)		1.10 (0.48 – 2.68)	
<b>Right Amygdala</b>											
<b>Yes</b>	62 (43)	138 (21)	0.33	126 (14)	0.57	0.49 (0.34 – 0.69)	0.66	0.51 (0.31 – 0.66)	0.66	0.96 (0.51 – 2.20)	0.66
<b>No</b>	84 (57)	143 (26)		125 (18)		0.53 (0.30 – 0.78)		0.47 (0.22 – 0.70)		1.13 (0.43 – 3.60)	
<b>Left Amygdala</b>											
<b>Yes</b>	6 (4)	137 (8.1)	0.47	111 (12)	0.06	0.56 (0.43 – 0.80)	0.44	0.44 (0.20 – 0.57)	0.44	1.45 (0.76 – 4.77)	0.44
<b>No</b>	140 (96)	141 (24)		126 (16)		0.52 (0.30 – 0.72)		0.48 (0.28 – 0.70)		1.10 (0.43 – 2.61)	
<b>Frontobasal cortex</b>											
<b>Yes</b>	4 (3)	133 (10)	0.27	120 (3.8)	0.61	0.49 (0.32 – 0.64)	0.64	0.52 (0.36 – 0.68)	0.64	11.0 (0.49 – 1.83)	0.64
<b>No</b>	142 (97)	141 (24)		125 (16)		0.52 (0.31 – 0.73)		0.8 (0.27 – 0.69)		1.10 (0.46 – 2.75)	
<b>Diencephalic midline shift</b>											
<b>Yes</b>	7 (5)	139 (18)	0.94	130 (13)	0.26	0.45 (0.28 – 0.69)	0.90	0.48 (0.27 – 0.68)	0.90	0.82 (0.39 – 2.21)	0.90
<b>No</b>	139 (95)	141 (24)		125 (16)		0.52 (0.32 – 0.73)		0.55 (0.31 – 0.72)		1.10 (0.47 – 2.69)	
<b>Stroke volume, ml †</b>											
<b>&lt;=19.0</b>	73 (50)	145 (24)	0.38	124 (17)	0.14	0.55 (0.36 – 0.79)	0.15	0.45 (0.21 – 0.64)	0.15	1.21 (0.55 – 3.76)	0.15
<b>&gt;19.0</b>	73 (50)	142 (20)		128 (15)		0.50 (0.29 – 0.68)		0.50 (0.32 – 0.71)		1.02 (0.41 – 2.15)	

Abbreviations: Ad. = Admission; SBP = systolic blood pressure in mm Hg; CI = confidence interval; HF and LF = high and low frequency components of very short-term BP variability; nu = normalized units;

† Stroke volume was assessed at 24-hour CT scan and dichotomized by median value