SUPPLEMENTAL MATERIAL

BLOOD PRESSURE IN THE FIRST 6 HOURS FOLLOWING ENDOVASCULAR TREATMENT FOR ISCHEMIC STROKE IS ASSOCIATED WITH OUTCOME
| Center | Periprocedural blood pressure targets* (SBP/DBP) | Frequency of blood pressure measurements during 24 hours following EVT† | First and second preferred agent to treat arterial hypertension during first 24 hours after EVT‡ |
|--------|-------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1      | <185/110 mmHg                                   | 0-6: hourly 6-24 hours: 2-hourly NB IVT first hour every 15 minutes   | Labetalol, nicardipine                                                          |
| 2      | <185/110 mmHg                                   | 0-24: hourly                                                        | Labetalol                                                                      |
| 3      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-10 hours: 2-hourly 10-24 hours: 4-hourly    | Labetalol, nicardipine                                                          |
| 4      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-6 hours: 30 minutes 6-24 hours: hourly       | Labetalol                                                                      |
| 5      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-6 hours: 30 minutes 6-24 hours: hourly       | Labetalol, nicardipine                                                          |
| 6      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-8 hours: 30 minutes 8-24 hours: hourly       | Nifedipine, labetalol                                                          |
| 7      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-6 hours: 30 minutes 6-24 hours: hourly       | Labetalol, perindopril/nifedipine                                               |
| 8      | <185/110 mmHg                                   | 0-2 hours: 15 minutes 2-8 hours: 30 minutes 8-24 hours: hourly       | Labetalol, clonidine                                                            |

Abbreviations: DBP, diastolic blood pressure; EVT, endovascular treatment; SBP, systolic blood pressure.  
*Non-invasive blood pressure monitoring. † Preprocedural, procedural, and up to 24 hours post-procedural SBP targets. ‡ Might be different from the preferred agents for lowering blood pressure prior to intravenous alteplase administration or EVT.
Table I. Associations between continuous maximum SBP within first 24 hours following EVT and outcomes shown per 10mmHg increment in SBP (full cohort, n= 1161).

|                | (c)OR / β-coefficient, (95% CI) | a(c)OR / aβ-coefficient, (95% CI)* |
|----------------|--------------------------------|----------------------------------|
| **Primary outcome** |                                |                                  |
| mRS at 90 days   | 0.85 (0.82 to 0.89)            | 0.90 (0.85 to 0.94)              |
| **Secondary outcomes** |                               |                                  |
| mRS ≤2 at 90 days | 0.85 (0.82 to 0.90)            | 0.89 (0.83 to 0.95)              |
| NIHSS 24–48 hours †| 0.77 (0.58 to 0.95)            | 0.51 (0.31 to 0.70)              |
| Mortality at 90 days | 1.15 (1.10 to 1.21)            | 1.06 (0.99 to 1.14)              |
| New ischemic stroke | 0.89 (0.74 to 1.06)            | 0.92 (0.73 to 1.18)              |

Abbreviations: aβ, adjusted beta-coefficient; a(c)OR, adjusted (common) odds ratio; CI, confidence interval; EVT, endovascular treatment; IQR, interquartile range; mRS, modified Rankin Scale; NIHSS, National Institutes of Health Stroke Scale; SD, standard deviation; SBP, systolic blood pressure. *Variables in the model: maximum SBP, age, sex, history of stroke, diabetes mellitus, hypertension, atrial fibrillation, myocardial infarction, pre-stroke mRS, intravenous thrombolysis, SBP on hospital admission, NIHSS at baseline, collateral score, ASPECTS at baseline, occlusion location, general anesthesia, eTICI score, time between stroke onset to reperfusion, number of blood pressure measurements, and intervention center. †Reported effect measure is β-coefficient.
Table III. Associations between continuous minimum SBP within first 6 hours following EVT and outcomes.

|                              | Minimum SBP < 124mmHg per 10mmHg decrement in SBP | Minimum SBP ≥ 124mmHg per 10mmHg increment in SBP |
|------------------------------|-------------------------------------------------|---------------------------------------------------|
|                              | (c)OR/ β-coefficient, (95% CI)*                  | (c)OR/β-coefficient, (95% CI)*                    |
|                              | a(c)OR/ aβ-coefficient, (95% CI)*†              | a(c)OR/aβ-coefficient, (95% CI)*††               |
| Primary outcome              |                                                 |                                                   |
| mRS at 90 days               | 0.86 (0.78 to 0.95)                             | 0.85 (0.76 to 0.95)                              |
|                              | 0.76 (0.67 to 0.86)                             | 0.81 (0.71 to 0.92)                              |
| Secondary outcomes           |                                                 |                                                   |
| mRS ≤2 at 90 days            | 0.88 (0.79 to 0.99)                             | 0.90 (0.78 to 1.04)                              |
|                              | 0.79 (0.67 to 0.90)                             | 0.91 (0.73 to 1.04)                              |
| NIHSS 24–48 hours ‡          | 0.74 (-0.26 to 1.23)                            | 0.41 (-0.02 to 0.84)                             |
|                              | 1.44 (0.83 to 2.05)                             | 0.76 (0.23 to 1.28)                              |
| Mortality at 90 days         | 1.20 (1.06 to 1.34)                             | 1.22 (1.04 to 1.40)                              |
|                              | 1.33 (1.15 to 1.54)                             | 1.23 (1.01 to 1.45)                              |
| Symptomatic intracranial hemorrhage § | 1.11 (0.80 to 1.43) | 1.17 (0.83 to 1.57) | 1.32 (0.93 to 1.79) | 1.34 (0.91 to 1.90) |
| Extracranial hemorrhage      | 1.61 (1.26 to 2.05)                             | 1.71 (1.27 to 2.30)                              |
|                              | 1.78 (1.24 to 2.50)                             | 1.80 (1.21 to 2.67)                              |
| New ischemic stroke          | 1.30 (0.92 to 1.71)                             | 1.38 (0.91 to 1.93)                              |
|                              | 1.30 (0.79 to 1.93)                             | 1.35 (0.78 to 2.19)                              |

Abbreviations: aβ, adjusted beta-coefficient; a(c)OR, adjusted (common) odds ratio; CI, confidence interval; EVT, endovascular treatment; mRS, modified Rankin Scale; NIHSS, National Institutes of Health Stroke Scale; SBP, systolic blood pressure. *regression models include a restricted cubic spline function with 3 knots for the continuous minimum SBP term. †Variables in the model: minimum SBP, age, sex, history of stroke, diabetes mellitus, hypertension, atrial fibrillation, myocardial infarction, pre-stroke mRS, intravenous thrombolysis, SBP on hospital admission, NIHSS at baseline, collateral score, ASPECTS at baseline, occlusion location, general anesthesia, eTICI after EVT, time from stroke onset to reperfusion, number of blood pressure measurements, and intervention center. ‡Reported effect measure is β-coefficient. §Patients with sICH ≤6 hours following EVT were excluded (n=17).
Table IV. Associations between continuous mean SBP within first 6 hours following EVT and outcomes.

|                                | Mean SBP< 138mmHg per 10mmHg decrement | Mean SBP ≥ 138mmHg per 10mmHg increment |
|--------------------------------|----------------------------------------|----------------------------------------|
|                                | (c)OR/ β-coefficient, (95% CI)*         | (c)OR/ β-coefficient, (95% CI)*†        |
|                                | a(c)OR/ αβ-coefficient, (95% CI)*       | a(c)OR/αβ-coefficient, (95% CI)*†       |
| Primary outcome                |                                        |                                        |
| mRS at 90 days                 | 1.01 (0.90 to 1.13)                    | 0.97 (0.86 to 1.10)                    |
|                                | 0.83 (0.72 to 0.96)                    | 0.88 (0.76 to 1.03)                    |
| Secondary outcomes            |                                        |                                        |
| mRS ≤2 at 90 days              | 1.05 (0.92 to 1.18)                    | 1.06 (0.88 to 1.23)                    |
|                                | 0.90 (0.74 to 1.03)                    | 1.01 (0.78 to 1.19)                    |
| NIHSS 24–48 hours ‡            | 0 (-0.54 to 0.55)                     | -0.07 (-0.56 to 0.41)                  |
|                                | 0.86 (0.16 to 1.56)                    | 0.40 (-0.20 to 0.99)                   |
| Mortality at 90 days           | 1.04 (0.90 to 1.21)                    | 1.13 (0.95 to 1.36)                    |
|                                | 1.26 (1.06 to 1.51)                    | 1.20 (0.97 to 1.49)                    |
| Symptomatic intracranial       | 0.94 (0.61 to 1.35)                    | 1.06 (0.66 to 1.56)                    |
| hemorrhage §                   | 1.18 (0.75 to 1.77)                    | 1.29 (0.79 to 1.99)                    |
| Extracranial hemorrhage        | 1.50 (1.02 to 2.10)                    | 1.66 (1.07 to 2.51)                    |
|                                | 1.61 (0.98 to 2.52)                    | 1.55 (0.90 to 2.58)                    |
| New ischemic stroke            | 1.49 (0.99 to 2.16)                    | 1.66 (0.98 to 2.52)                    |
|                                | 1.53 (0.86 to 2.52)                    | 1.73 (0.88 to 3.11)                    |

Abbreviations: αβ, adjusted beta-coefficient; a(c)OR, adjusted (common) odds ratio; CI, confidence interval; EVT, endovascular treatment; mRS, modified Rankin Scale; NIHSS, National Institutes of Health Stroke Scale; SBP, systolic blood pressure. *regression models include a restricted cubic spline function with 3 knots for the continuous mean SBP term. †Variables in the model: mean SBP, age, sex, history of stroke, diabetes mellitus, hypertension, atrial fibrillation, myocardial infarction, pre-stroke mRS, intravenous thrombolysis, SBP on hospital admission, NIHSS at baseline, collateral score, ASPECTS at baseline, occlusion location, general anesthesia, eTICI after EVT, time from stroke onset to reperfusion, number of blood pressure measurements, and intervention center. ‡Reported effect measure is β-coefficient. §Patients with symptomatic intracranial hemorrhage ≤6 hours following EVT were excluded (n=17).
### Table V. Outcomes shown according to tertiles of SBP during first 6 hours following EVT.

| Outcome measures                                      | Maximum SBP | Minimum SBP | Mean SBP |
|--------------------------------------------------------|-------------|-------------|----------|
|                                                        | < 140 mmHg  | 110 - 130 mmHg | >150 mmHg | Missing |
|                                                        | (n = 365)   | (n = 413)    | (n = 368) | (n = 426) |
| mRS ≤2 at 90 days, n (%)                               | 184 (54)    | 183 (48)    | 200 (52)  | 25/37/22  |
| NIHSS 24–48 hours, median [IQR]                        | 8 [3 to 14] | 9 [3 to 15] | 8 [3 to 15] | 14/18/30  |
| Mortality at 90 days, n (%)                            | 68 (20)     | 84 (22)     | 81 (28)   | 32/28/24  |
| Symptomatic intracranial hemorrhage, n (%)             | 12 (3.3)    | 10 (2.4)    | 16 (5)    | 32/28/24  |
| Extradural hemorrhage, n (%)                           | 6 (1.6)     | 3 (0.7)     | 13 (4.0)  | 7 (1.6)   |
| New ischemic stroke, n (%)                             | 7 (1.9)     | 4 (1.0)     | 8 (2.5)   | 7 (1.6)   |
|                                                        | 189 (45)    | 151 (44)    | 151 (44)  | 35/25/24  |
|                                                        | 101 (24)    | 80 (23)     | 80 (23)   | 23/15/24  |
|                                                        | 109 (35)    | 117 (34)    | 117 (34)  | 35/25/24  |
|                                                        | 31 (9.3)    | 32 (8.7)    | 32 (8.7)  |            |
|                                                        | 6 (1.8)     | 7 (1.9)     | 7 (1.9)   |            |
|                                                        | 4 (1.2)     | 7 (1.9)     | 7 (1.9)   |            |

Abbreviations: IQR, interquartile range; min, minutes; mRS, modified Rankin Scale; n, number; NIHSS, National Institutes of Health Stroke Scale; SD, standard deviation; SBP, systolic blood pressure

Captions: *Tertiles of SBP were rounded to tens. Continuous data are presented as mean (SD) for normal distributed data or as median [IQR] for skewed data. Categorical data are presented as numbers (percentage).
Figure I. Distribution of modified Rankin scale according to tertiles of maximum, minimum and mean SBP during the first 6 hours following EVT. SBP tertiles are used for data inspection only, analysis is based on the full range of SBP measures. Abbreviations: EVT, endovascular treatment; mRS, modified Rankin Scale; n, number; SBP, systolic blood pressure.
Figure II. Relationship of maximum SBP with probability of sICH, probability of mortality at 90 days and NIHSS at 24-48 hours following EVT.

The models include the following variables: maximum SBP, age, NIHSS at baseline, ASPECTS at baseline, history of hypertension, time between stroke onset to reperfusion, and an interaction term for maximum SBP*successful reperfusion. The figures depict the probability of symptomatic intracranial hemorrhage (A), the probability of mortality (B) and NIHSS score at 24-48 hours after EVT (C) with 95% confidence intervals, for each level of maximum SBP in the first 6 hours following EVT for successful and unsuccessful reperfusion separately and a p-value for interaction (maximum SBP*successful reperfusion).

Abbreviations: eTICI, extended Thrombolysis in Cerebral Infarction; EVT, endovascular treatment; mRS, modified Rankin Scale; NIHSS, National Institute of Health Stroke score; SBP, systolic blood pressure; sICH, symptomatic intracranial hemorrhage.
Figure III. Maximum SBP course in the first 6 hours following EVT for patients with successful reperfusion versus patient with unsuccessful reperfusion. Black dots represent individual SBP measurements. The boxplots indicate the interquartile ranges around the median which are reflected by the red (unsuccessful reperfusion) and blue (successful reperfusion) lines. EVT, endovascular treatment; SBP, systolic blood pressure.
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