

## Supplementary Material

### Patient selection

The a priori defined inclusion criteria were: (1) acute ischemic stroke with large vessel occlusion of the distal internal carotid artery or middle cerebral artery confirmed by multimodal computed tomography (CT) on admission (non-enhanced CT [NECT], CT angiography [CTA], and CT perfusions [CTP]) within 6 hours from symptom onset; (2) visually evident early infarct lesion as indicated by ischemic hypoattenuation in admission NECT and/or perfusion lesion with reduced cerebral blood volume in CTP; (3) subsequently performed endovascular procedure with documented Thrombolysis In Cerebral Infarctions (TICI) score; (4) documented time from symptom onset to imaging and National Institute of Health Stroke Scale (NIHSS) score; and (5) absence of intracranial hemorrhage and preexisting infarctions in admission NECT. Baseline clinical characteristics and demographic information were extracted from the medical records, including time from onset to admission and blood glucose at admission, as well as anti-diabetic medication including insulin. A history of diabetes mellitus was retrieved from clinical documentation. Functional outcome was extracted from the registry using modified Rankin Scale (mRS) scores after 90 days.

### Imaging

Patients received a comprehensive stroke imaging protocol by multimodal CT at admission with NECT and CTA and additional CTP in equal order on an iCT 25 scanner (Philips Healthcare, Best, The Netherlands); NECT: collimation 64×0.625, pitch 0.297, rotation time 0.4 second, field of view (FOV) 270 mm, tube voltage 120 kV, tube current 300 mA, 4.0 mm slice reconstruction; CTA: collimation 64×0.625, pitch 0.985, rotation time 0.4 second, FOV 220 mm, tube voltage 120 kV, 300 mAs, 2.0 mm slice reconstruction, 5 mm maximum intensity projec-

tion reconstruction with 1 mm increment; CTP: collimation 64×1.25, rotation time 0.5 second, FOV 220 mm, tube current 80 kV, tube current 140 mAs, 5 mm slice reconstruction, slice sampling rate 1.8 seconds, scan time 72 seconds, biphasic injection with 40 mL of highly iodinated contrast medium with 400 mM/mL injected with 6 mL/sec followed by 40 mL NaCl chaser bolus. Perfusion datasets were inspected for quality and excluded in case of severe motion artefacts.

### Statistical analysis

Continuous variables are presented as means, confidence intervals of means, standard deviations or medians and ranges. Kolmogorov-smirnov tests were used to determine if the data sets were well-modeled by a normal distribution. Patients with good (mRS 0 to 2) outcome were compared to patients with mRS >2 in Table 1 using Student t-tests (normal distribution) or Mann-Whitney U tests (non-normal distribution). Moreover, patients below or above 140 mg/dL BGL were compared. The relationship of BGL on early edema (e.g., NWU in admission CT) was analyzed using multivariable linear regression adjusted for Alberta Stroke Program Early CT Score (ASPECTS), age, and NIHSS.

The association of BGL on clinical outcome was analyzed using univariable and multivariable logistic regression analysis with backward selection adjusted for collateral score, age, NIHSS, ASPECTS, NWU, and recanalization status. The dependent variable was functional independence (mRS 0 to 2).

A statistically significant difference was accepted at a *P*-value of less than 0.05. Analyses were performed using MedCalc version 11.5.1.0 (MedCalc statistical software, Mariakerke, Belgium) and R (R Core Team, R: A Language and Environment for Statistical Computing; R Foundation for Statistical Computing, Vienna, Austria; 2017).

### Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.