

## Supplemental materials

### **Supplemental Results:**

#### **Details regarding the multivariable selection process**

The first effect (variable) to enter the model was the one with the largest score Chi-Square statistic, namely thrombus length. The second variable to enter the model was occlusion site, and the third was the HIR. A fourth variable, diabetes mellitus, met the criteria for entry into the model, but was subsequently automatically removed from the final model because it met the criteria for backward elimination. The list of steps was therefore as follows:

Step 1: Thrombus length entered

Step 2: Occlusion site entered

Step 3: HIR entered

Step 4: Diabetes mellitus entered

Step 5: Diabetes mellitus removed.

Of note, the use of an alternative selection method, solely based on backward elimination, led to the inclusion of the same variables:

Step 1: NIHSS removed

Step 2: DWI volume removed

Step 3: Statin treatment removed

Step 4: PWI-DWI mismatch volume removed

Step 5: Tmax>10s volume removed

Step 6: Diabetes mellitus removed

#### **Comparison of the final multivariable model with and without HIR**

The c-statistic of the final multivariable model (Table 2, including HIR) was 0.913, while the c-statistic of the same model without HIR was 0.905 ( $P=0.36$  for comparison). However, the integrated discrimination improvement (IDI) analysis suggested that the discrimination of the model was improved with the inclusion of HIR (IDI 0.06, 95%CI 0.02-0.11,  $P=0.009$ ). The net reclassification improvement (NRI) was 0.20, 95%CI 0.01-0.39,  $P=0.049$ . The inclusion of HIR in the model led to the correct reclassification of 17% of early recanalizers and 4% of patients without early recanalization.

**Supplemental Table I:** Parameters of the dynamic susceptibility-contrast perfusion-weighted imaging sequence in the six participating centres.

<b>Parameters</b>	<b>Sainte-Anne</b>	<b>Lyon</b>		<b>Montpellier</b>		<b>Tours</b>	<b>Nancy</b>	<b>Orléans</b>
Magnetic field strength	1.5T	3T	1.5T	3T	1.5T	3T	1.5T	1.5T
Echo time (ms)	60	40	30-40	38	38	29	46	30
Repetition time (ms)	2000	1600	1550-2260	1800	1800	1750	2325	1650
Number of phases	25	40	40-60	100	100	60	30	60
Field of view (cm)	24×24	23×23	23×23	24×24	24×24	24.5×24.5	23×23	23×23
Matrix	64×96	112×108	212×139	100×100	108×108	128×128	96×128	128×128
Slice thickness (mm)	6	3.5	5	5	5	4	5	5

**Supplemental Table II:** Multivariable model for prediction of early recanalization in the patient subgroup with thrombus length <14mm (n=112).

<b>Variable</b>	<b>Adjusted OR (95%CI)</b>	<b>P</b>
HIR, per 10% increase	0.62 (0.42-0.90)	0.01
Thrombus length, per 1-mm increase	0.58 (0.44-0.75)	<0.001
Occlusion site		0.006
ACI-T/L or M1 proximal	Reference	
M1 distal or M2	5.49 (1.64-18.38)	