

Online supplements

Appendix 1. Details of the (A) DSS-discharge and (B) DSS-3 months.

The probability of each of the outcome categories is calculated according to the logistic formula: $1/(1 + \exp^{-LP})$, in which LP stands for linear predictor.

A. To calculate the probability P on each of the five BI categories:

Slope Barthel for age<60 = nihss*-0.213 + 6*-0.468 + diabetes*-0.496

Slope Barthel for age>60 = nihss*-0.213 + age per decade*-0.468 + diabetes*-0.496

LP(Barthel 19-20) = Slope + 4.91

LP(Barthel 15-18) = Slope + 5.45 - Slope + 4.91

LP(Barthel 10-14) = Slope + 6.14 - Slope + 5.45

LP(Barthel 1-9) = Slope + 7.66 - Slope + 6.14

LP(Barthel 0) = 1 - Slope + 7.66

B. To calculate the probability P on each of the five mRS categories:

Slope Rankin for age<60 = nihss*0.182 + 6*0.495 + diabetes*0.410 + previous stroke*0.249 + atrial fibrillation*0.212

Slope Rankin for age>60 = nihss*0.182 + age per decade*0.495 + diabetes*0.410 + previous stroke*0.249 + atrial fibrillation*0.212

LP(Rankin 6) = Slope + -4.68

LP(Rankin 4-5) = Slope + -3.76 - Slope + -4.68

LP(Rankin 3) = Slope + -2.93 - Slope + -3.76

LP(Rankin 2) = Slope + -1.89 - Slope + -2.93

LP(Rankin 0-1) = 1 - Slope + -1.89

Supplemental Table 1. Discriminative ability of DSS-3 months in internal and external validation.

Internal validation						
Cohort	mRS at three months			Apparent AUC	Internally validated AUC	
PAIS (n = 1227)				0.75 (0.74-0.77)	0.748 (0.74-0.77)	
External validation						
Cohort	AUCs for different mRS cutoffs (95%CI)				Ordinal AUC (95%CI)	Ordinal case- mix-corrected AUC (95%CI)
	≥ 2	≥ 3	≥ 4	≥ 6		
PRACTISE (n = 1589)	0.77 (0.77-0.79)	0.81 (0.81-0.84)	0.83 (0.83-0.86)	0.83 (0.83-0.86)	0.74 (0.72-0.76)	0.79 (0.76-0.79)
PASS (n = 2107)	0.66 (0.66-0.68)	0.81 (0.81-0.83)	0.84 (0.84-0.86)	0.85 (0.85-0.88)	0.69 (0.69-0.72)	0.77 (0.76-0.78)
Total (n = 4923)	0.73 (0.73-0.74)	0.81 (0.81-0.83)	0.84 (0.84-0.86)	0.83 (0.83-0.85)	0.73 (0.72-0.74)	0.78 (0.77-0.79)

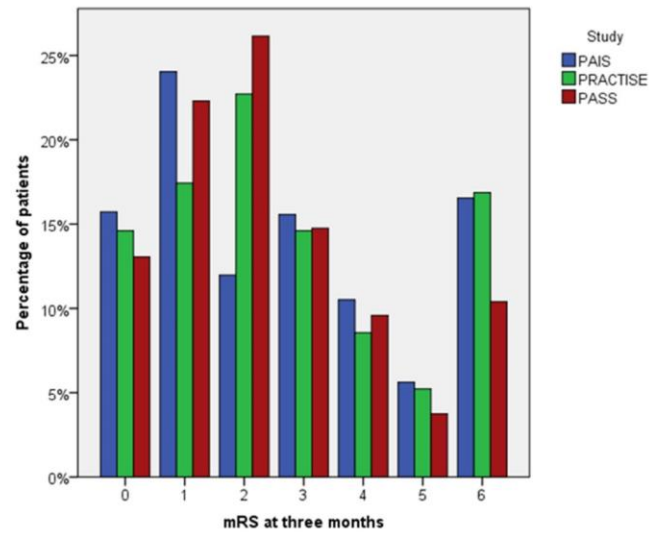
mRS=modified Rankin Scale; AUC=area under the curve

Supplemental Figure 1. Outcome distribution of (A) the BI at discharge in PAIS and (B) the mRS at three months in PAIS, PRACTISE and PASS.

[insert Supplemental Figure 1A and B.]

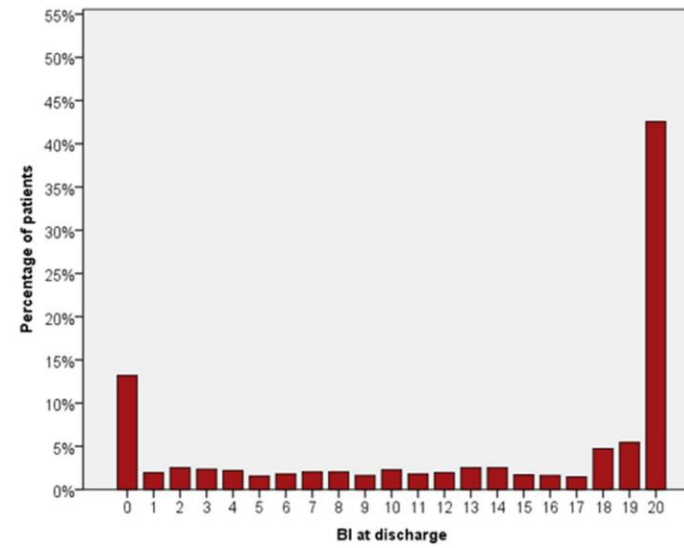
A.

Outcome distribution of mRS at three months in PAIS, PRACTISE and PASS data



B.

Outcome distribution BI at discharge in PAIS data



Supplemental Figure 2. Non-linear relation between age and the log odds of higher BI at discharge after acute ischemic stroke in PAIS.
[insert Supplemental Figure 2.]

