

Supplementary Table 2. Multivariable predictors of in-hospital neurological deterioration after ICH in the derivation cohort (n=1,309)

Variable	β -coefficients	SE	Adjusted OR*	95% CI	P
Model intercept	-4.719				
Age (1 year increase)	0.012	0.005	1.012	1.001–1.023	0.030
Male sex	0.389	0.167	1.476	1.064–2.048	0.020
History of diabetes mellitus (yes)	0.451	0.187	1.570	1.089–2.265	0.020
History of atrial fibrillation (yes)	1.832	0.484	6.244	2.418–16.12	<0.001
GCS (1 point decrease)	0.161	0.020	1.175	1.129–1.223	<0.001
Dysphagia on admission (yes)	0.804	0.160	2.234	1.632–3.059	<0.001
Hematoma location (infratentorial)	0.524	0.226	1.688	1.084–2.630	0.020
Hematoma volume (1 ml increase)	0.013	0.002	1.013	1.008–1.017	<0.001
Blood glucose (per 1 mmol/L increase)	0.069	0.016	1.071	1.037–1.106	<0.001

ICH, intracerebral hemorrhage; SE, standard error; OR, odds ratio; CI, confidence interval; GCS, Glasgow Coma Scale.

*Multivariable logistic regression adjusted for demographics, time from onset to hospitalization, stroke risk factors, pre-admission antithrombotic medications, pre-stroke dependence, admission National Institutes of Health Stroke Scale and GCS scores, blood pressure, hematoma volume, hematoma location, intraventricular and subarachnoid extension, etiology, withdrawal of medical care, and blood glucose levels.

Supplementary Table 3. Predictive performance of ICH progression score with regard to in-hospital neurological deterioration after ICH

Variable	AUROC	95% CI	P*	Youden Index	Cutoff	Sensitivity	Specificity	PPV	NPV
In the derivation cohort (n=1,309)	0.840	0.813–0.867	<0.0001	0.533	8	0.752	0.781	0.448	0.930
In the internal validation cohort (n=655)	0.845	0.808–0.881	<0.0001	0.546	8	0.756	0.790	0.454	0.933
In the overall cohort (n=1,964)	0.841	0.820–0.861	<0.0001	0.537	8	0.753	0.783	0.450	0.931
In the external validation cohort (n=3,255)	0.810	0.789–0.832	<0.0001	0.474	8	0.733	0.741	0.326	0.942
In the external validation cohort (n=314)	0.831	0.696–0.966	<0.0001	0.659	8	0.786	0.873	0.224	0.989

ICH, intracerebral hemorrhage; AUROC, area under the receiver operating characteristic curve; CI, confidence interval; PPV, positive predictive value; NPV, negative predictive value.

*P indicated significance test of AUROC. Null hypothesis is that true area=0.5.

Supplementary Table 4. Calibration of the ICH progression score with regard to in-hospital neurological deterioration after ICH

Cohort	Goodness of fit test		
	P	Cox and Snell R ²	Nagelkerke R ²
Derivation cohort (n=1,309)	0.16	0.213	0.341
Internal validation cohort (n=655)	0.10	0.222	0.358
External validation cohort-1 (n=3,255)	0.09	0.158	0.279
External validation cohort-2 (n=314)	0.15	0.095	0.195

ICH, intracerebral hemorrhage.