

Additional table 1. Comparison of baseline characteristics of patients included and excluded

	Included (n=1575)	Excluded (n=389)	P value
Demographics			
Age, y, median (IQR)	57.2±14.3	55.0±14.2	0.006
Gender (male), n (%)	1061 (67.2)	266 (68.4)	0.72
Onset to hospital (hours), median (IQR)	4.0 (1.8-11.1)	4.0 (2.0-10.0)	0.58
Risk factors, n (%)			
Hypertension	1093 (69.4)	389 (70.4)	0.71
Diabetes mellitus	236 (15.0)	53 (13.6)	0.52
Dyslipidemia	150 (9.5)	34 (8.7)	0.69
Atrial fibrillation	23 (1.5)	7 (1.8)	0.64
History of stroke/TIA	263 (16.7)	46 (11.8)	0.02
Myocardial infarction	35 (2.2)	3 (0.8)	0.07
Heart failure	7 (0.4)	1 (0.3)	1.00
Current smoker	511 (32.4)	117 (30.1)	0.37
Alcohol consumption	589 (37.4)	127 (32.6)	0.08
Pre-admission anticoagulation, n (%)	17 (1.1)	3 (0.8)	0.59
Pre-admission antiplatelet, n (%)	246 (15.6)	31 (8.0)	<0.001
Pre-stroke mRS score, median (IQR)	0 (0-0)	0 (0-0)	0.30
Admission NIHSS score, median (IQR)	11 (3-21)	11 (3-20)	0.47
Admission GCS score, median (IQR)	14 (8-15)	14 (9-15)	0.40
Admission SBP (mm Hg), median (IQR)	164 (147-187)	166 (148-183)	0.90
Admission DBP (mm Hg), median (IQR)	95 (82-109)	97 (84-110)	0.38
Admission WBC, 10 ⁹ /L, median (IQR)	9.83 (7.41-13.1)	9.57 (7.19-12.2)	0.22
Admission glucose (mmol/L), median (IQR)	7.4 (6.1-9.3)	7.1 (5.9-8.6)	0.53
Admission creatinine (mmol/L), median (IQR)	63.8 (52.7-77.2)	62.0 (52.4-74.0)	0.13
Hematoma location			0.006
Supratentorial ICH, n (%)	1384 (87.9)	361 (92.8)	
Infratentorial ICH, n (%)	191 (12.1)	28 (7.2)	
Hematoma volume (cm ³), median (IQR)	16.1 (6.2-39.5)	14.8 (5.7-36.0)	0.16
Intraventricular extension, n (%)	181 (11.5)	21 (5.4)	<0.001
Subarachnoid extension, n (%)	230 (14.6)	34 (8.7)	0.002
Etiology diagnosis			0.12
Primary ICH	1438 (92.3)	367 (94.4)	
Secondary ICH	137 (8.7)	22 (5.7)	
Withdrawal of medical care, n (%)	104 (6.6)	35 (9.0)	0.12
Surgical treatment	312 (19.8)	54 (13.9)	0.007

Abbreviation: IQR, Interquartile Range; NIHSS, National Institutes of Health Stroke Scale score; GCS, Glasgow Coma Scale; SBP, Systolic Blood Pressure; DBP, Diastolic Blood Pressure; WBC, White Cell Count; ICH, Intracerebral Hemorrhage; mRS, modified Rankin Scale.

Additional table 2. Discrimination of ICH risk models with regard to mortality and poor functional outcome (mRS $\geq$ 3) at 1-month after ICH (n=1575)

	AUROC	95% CI	Δ AUROC*	P value ^{&}	Youden Index	Cutoff	Sensitivity	Specificity	PPV	NPV
Mortality at 1-month after ICH										
The ICH-FOS (2013)	0.856	0.838-0.873	Reference		0.590	6	0.817	0.772	0.471	0.945
The GP on STAGE score (2006)	0.847	0.822-0.873	0.009	0.22	0.604	...	0.785	0.818	0.518	0.939
Weimar' equation-II (2009)	0.846	0.828-0.864	0.01	0.22	0.586	...	0.785	0.801	0.495	0.922
The EDICH score (2014)	0.845	0.821-0.870	0.011	0.23	0.585	2	0.754	0.831	0.527	0.932
The Essen ICH score (2006)	0.843	0.824-0.860	0.013	0.05	0.585	5	0.741	0.843	0.541	0.929
The modified ICH Score (2003)	0.838	0.815-0.861	0.018	<0.001	0.565	2	0.785	0.779	0.469	0.936
CAA- ICH score (2016)	0.835	0.815-0.853	0.021	<0.001	0.528	1	0.888	0.640	0.380	0.958
The simplified ICH score (2009)	0.835	0.816-0.853	0.021	<0.001	0.520	7	0.667	0.852	0.529	0.912
Huang's score (2008)	0.834	0.814-0.852	0.022	<0.001	0.600	3	0.747	0.852	0.557	0.932
ICHOP (2018)	0.834	0.815-0.852	0.022	<0.001	0.589	5	0.779	0.809	0.504	0.937
The ICH index (2012)	0.833	0.813-0.851	0.023	<0.001	0.555	...	0.776	0.778	0.466	0.933
Lisk's equation (1994)	0.829	0.809-0.847	0.027	<0.001	0.568	...	0.766	0.801	0.490	0.933
The FUNC Score (2008)	0.823	0.804-0.842	0.033	<0.001	0.532	7	0.849	0.682	0.399	0.948
Mase's equation (1995)	0.821	0.801-0.839	0.035	<0.001	0.541	...	0.776	0.765	0.451	0.932
The IVH score (2010)	0.819	0.799-0.837	0.037	<0.001	0.568	1	0.856	0.712	0.425	0.952
Broderick's score (1993)	0.813	0.793-0.832	0.043	<0.001	0.550	...	0.741	0.809	0.492	0.926
The ICH-GS (2007)	0.812	0.792-0.831	0.044	<0.001	0.518	7	0.814	0.704	0.406	0.939
max-ICH (2017)	0.811	0.791-0.830	0.045	<0.001	0.519	2	0.862	0.656	0.384	0.951
The MICH Score (2008)	0.803	0.782-0.822	0.053	<0.001	0.481	1	0.789	0.692	0.389	0.930
The original ICH Score (2001)	0.802	0.782-0.821	0.054	<0.001	0.487	1	0.785	0.701	0.395	0.930
Ho's score (2016)	0.776	0.755-0.797	0.08	<0.001	0.489	...	0.792	0.697	0.394	0.931
Hallevy's score (2002)	0.769	0.747-0.789	0.087	<0.001	0.407	2	0.696	0.710	0.374	0.904
Tuhrim's equation (1991)	0.768	0.738-0.798	0.088	<0.001	0.455	...	0.674	0.781	0.433	0.906

The Kinshasa ICH score (2012)	0.691	0.656-0.726	0.165	<0.001	0.335	6	0.664	0.670	0.334	0.890
Shaya's score (2005)	0.637	0.599-0.675	0.219	<0.001	0.251	2	0.607	0.643	0.297	0.868
Weimar' equation-I (2006)	0.623	0.588-0.658	0.233	<0.001	0.179	...	0.527	0.651	0.273	0.847
Safatli's score (2016)	0.608	0.581-0.635	0.248	<0.001	0.215	0	0.309	0.905	0.449	0.841
Poor functional outcome (mRS$\geq$3) at 1-month after ICH										
The ICH-FOS (2013)	0.869	0.852-0.887	Reference		0.575	4	0.715	0.860	0.890	0.655
The Essen ICH score (2006)	0.848	0.829-0.866	0.021	<0.001	0.534	2	0.743	0.791	0.850	0.660
Weimar' equation-II (2009)	0.846	0.827-0.866	0.023	<0.001	0.531	...	0.826	0.705	0.817	0.719
ICHOP (2018)	0.845	0.826-0.865	0.024	<0.001	0.530	3	0.701	0.828	0.867	0.636
max-ICH (2017)	0.842	0.823-0.862	0.027	<0.001	0.545	1	0.831	0.713	0.822	0.727
Hallevy's score (2002)	0.833	0.813-0.853	0.036	<0.001	0.550	1	0.816	0.733	0.830	0.716
Lisk's equation (1994)	0.801	0.780-0.822	0.068	<0.001	0.444	...	0.639	0.804	0.839	0.584
The modified ICH Score (2003)	0.800	0.779-0.822	0.069	<0.001	0.460	1	0.676	0.784	0.833	0.604
The GP on STAGE score (2006)	0.798	0.777-0.819	0.071	<0.001	0.481	...	0.710	0.761	0.827	0.631
Mase's equation (1995)	0.795	0.774-0.817	0.074	<0.001	0.456	...	0.593	0.863	0.873	0.572
The IVH score (2010)	0.789	0.767-0.811	0.08	<0.001	0.460	1	0.578	0.881	0.886	0.568
The ICH index (2012)	0.781	0.758-0.803	0.088	<0.001	0.445	...	0.690	0.754	0.817	0.606
The MICH Score (2008)	0.779	0.757-0.802	0.09	<0.001	0.426	1	0.568	0.858	0.865	0.556
The FUNC Score (2008)	0.778	0.756-0.801	0.091	<0.001	0.459	7	0.600	0.858	0.871	0.575
CAA- ICH score (2016)	0.772	0.749-0.794	0.097	<0.001	0.475	1	0.648	0.827	0.856	0.597
Broderick's score (1993)	0.767	0.744-0.790	0.102	<0.001	0.454	...	0.686	0.768	0.825	0.606
The ICH-GS (2007)	0.767	0.744-0.790	0.102	<0.001	0.425	7	0.563	0.861	0.866	0.554
The simplified ICH score (2009)	0.762	0.739-0.785	0.107	<0.001	0.442	6	0.636	0.805	0.839	0.583
The EDICH score (2014)	0.756	0.732-0.779	0.113	<0.001	0.409	1	0.618	0.791	0.825	0.566
The original ICH Score (2001)	0.752	0.728-0.775	0.117	<0.001	0.397	1	0.548	0.848	0.852	0.542
Huang's score (2008)	0.744	0.721-0.768	0.125	<0.001	0.413	1	0.582	0.830	0.845	0.556

Tuhrim's equation (1991)	0.727	0.702-0.751	0.142	<0.001	0.346	...	0.443	0.903	0.879	0.505
Ho's score (2016)	0.718	0.694-0.743	0.151	<0.001	0.400	...	0.569	0.830	0.842	0.548
Shaya's score (2005)	0.716	0.691-0.741	0.153	<0.001	0.361	2	0.545	0.815	0.825	0.530
The Kinshasa ICH score (2012)	0.712	0.687-0.737	0.157	<0.001	0.376	6	0.541	0.835	0.839	0.534
Weimar' equation-I (2006)	0.680	0.653-0.707	0.189	<0.001	0.258	...	0.468	0.789	0.780	0.483
Safatli's score (2016)	0.590	0.562-0.618	0.279	<0.001	0.180	0	0.207	0.973	0.926	0.436

* Δ AUROC denotes the difference in AUROC between the ICH-FOS and compared scores with regard to mortality and poor functional outcome at 3-month after ICH.

& P value of comparing paired AUROC with Delong's method.

Abbreviation: ICH, Intracerebral Hemorrhage; AUROC, Area Under the Receiver Operating Characteristic Curve; CI, Confidence Interval; PPV, Positive Predictive Value; NPV, Negative Predictive Value.

Additional table 3. Discrimination of ICH risk models with regard to mortality and poor functional outcome (mRS $\geq$ 3) at 1-year after ICH (n=1575)

	AUROC	95% CI	Δ AUROC*	P value ^{&}	Youden Index	Cutoff	Sensitivity	Specificity	PPV	NPV
Mortality at 1-year after ICH										
The ICH-FOS (2013)	0.850	0.829-0.871	Reference		0.562	6	0.764	0.800	0.562	0.909
The modified ICH Score (2003)	0.838	0.814-0.861	0.012	<0.001	0.565	2	0.785	0.779	0.469	0.936
The Essen ICH score (2006)	0.837	0.814-0.861	0.013	<0.001	0.544	5	0.679	0.865	0.632	0.888
Lisk's equation (1994)	0.826	0.801-0.850	0.024	<0.001	0.536	...	0.714	0.822	0.577	0.895
Huang's score (2008)	0.822	0.797-0.848	0.028	<0.001	0.541	2	0.706	0.835	0.592	0.894
Weimar' equation-II (2009)	0.821	0.796-0.845	0.029	<0.001	0.530	...	0.711	0.818	0.571	0.893
max-ICH (2017)	0.817	0.793-0.840	0.033	<0.001	0.516	2	0.832	0.684	0.472	0.923
The GP on STAGE score (2006)	0.817	0.791-0.843	0.033	<0.001	0.542	...	0.706	0.835	0.594	0.894
The EDICH score (2014)	0.813	0.787-0.839	0.037	<0.001	0.525	2	0.676	0.848	0.603	0.886
CAA- ICH score (2016)	0.812	0.787-0.838	0.038	<0.001	0.499	1	0.837	0.662	0.457	0.923
ICHOP (2018)	0.810	0.784-0.835	0.04	<0.001	0.518	5	0.694	0.824	0.572	0.888
The FUNC Score (2008)	0.809	0.784-0.834	0.041	<0.001	0.514	7	0.807	0.707	0.483	0.915
The IVH score (2010)	0.807	0.783-0.831	0.043	<0.001	0.527	1	0.794	0.733	0.502	0.913
The ICH-GS (2007)	0.806	0.780-0.831	0.044	<0.001	0.499	7	0.771	0.727	0.490	0.904
The simplified ICH score (2009)	0.805	0.778-0.831	0.045	<0.001	0.473	7	0.604	0.869	0.610	0.866
The ICH index (2012)	0.800	0.774-0.827	0.05	<0.001	0.496	...	0.701	0.794	0.536	0.887
Mase's equation (1995)	0.795	0.769-0.822	0.055	<0.001	0.494	...	0.711	0.783	0.527	0.889
The original ICH Score (2001)	0.788	0.762-0.815	0.062	<0.001	0.454	1	0.734	0.720	0.471	0.889
Broderick's score (1993)	0.785	0.756-0.815	0.065	<0.001	0.496	...	0.676	0.819	0.560	0.882
The MICH Score (2008)	0.775	0.749-0.802	0.075	<0.001	0.433	1	0.726	0.706	0.457	0.884
Hallevy's score (2002)	0.772	0.746-0.797	0.078	<0.001	0.407	2	0.674	0.733	0.461	0.869
Ho's score (2016)	0.766	0.738-0.793	0.084	<0.001	0.457	...	0.741	0.715	0.469	0.891
Tuhrim's equation (1991)	0.744	0.715-0.773	0.106	<0.001	0.421	...	0.624	0.797	0.511	0.662

The Kinshasa ICH score (2012)	0.674	0.642-0.707	0.176	<0.001	0.299	6	0.619	0.680	0.396	0.840
Weimar' equation-I (2006)	0.673	0.642-0.705	0.177	<0.001	0.261	...	0.578	0.682	0.382	0.827
Shaya's score (2005)	0.633	0.598-0.668	0.217	<0.001	0.238	2	0.584	0.654	0.365	0.823
Safatli's score (2016)	0.599	0.565-0.634	0.251	<0.001	0.199	0	0.285	0.913	0.528	0.790
Poor functional outcome (mRS$\geq$3) at 1-year after ICH										
The ICH-FOS (2013)	0.881	0.864-0.897	Reference		0.593	4	0.795	0.799	0.793	0.801
The Essen ICH score (2006)	0.863	0.845-0.881	0.018	<0.001	0.553	2	0.817	0.735	0.749	0.807
max-ICH (2017)	0.862	0.844-0.880	0.019	<0.001	0.578	2	0.740	0.837	0.815	0.769
Weimar' equation-II (2009)	0.843	0.825-0.862	0.038	<0.001	0.515	...	0.689	0.825	0.792	0.734
ICHOP (2018)	0.838	0.818-0.857	0.043	<0.001	0.530	3	0.766	0.764	0.758	0.772
Hallevy's score (2002)	0.828	0.808-0.848	0.053	<0.001	0.502	1	0.859	0.642	0.699	0.825
Lisk's equation (1994)	0.827	0.807-0.847	0.054	<0.001	0.513	...	0.615	0.898	0.855	0.707
The modified ICH Score (2003)	0.823	0.803-0.844	0.058	<0.001	0.502	1	0.753	0.749	0.744	0.759
The IVH score (2010)	0.817	0.796-0.839	0.064	<0.001	0.512	1	0.661	0.851	0.811	0.722
The FUNC Score (2008)	0.810	0.788-0.831	0.071	<0.001	0.517	7	0.686	0.831	0.797	0.733
The ICH-GS (2007)	0.803	0.782-0.825	0.078	<0.001	0.476	7	0.640	0.835	0.790	0.706
Mase's equation (1995)	0.803	0.782-0.825	0.078	<0.001	0.484	...	0.664	0.820	0.781	0.716
The GP on STAGE score (2006)	0.798	0.777-0.819	0.083	<0.001	0.481	...	0.719	0.761	0.827	0.631
CAA- ICH score (2016)	0.793	0.771-0.815	0.088	<0.001	0.505	1	0.720	0.784	0.763	0.744
Huang's score (2008)	0.792	0.769-0.815	0.089	<0.001	0.504	1	0.679	0.825	0.790	0.727
The simplified ICH score (2009)	0.791	0.769-0.813	0.09	<0.001	0.479	6	0.709	0.770	0.749	0.733
The MICH Score (2008)	0.786	0.763-0.808	0.095	<0.001	0.452	1	0.633	0.819	0.772	0.698
The ICH index (2012)	0.786	0.763-0.808	0.095	<0.001	0.451	...	0.677	0.774	0.743	0.713
The EDICH score (2014)	0.781	0.758-0.804	0.100	<0.001	0.457	1	0.692	0.765	0.740	0.720
The original ICH Score (2001)	0.781	0.758-0.804	0.100	<0.001	0.450	1	0.624	0.826	0.777	0.695
Broderick's score (1993)	0.769	0.745-0.792	0.112	<0.001	0.441	...	0.656	0.785	0.747	0.703

Ho's score (2016)	0.757	0.734-0.781	0.124	<0.001	0.450	...	0.624	0.826	0.777	0.695
Tuhrim's equation (1991)	0.747	0.723-0.771	0.134	<0.001	0.395	...	0.510	0.885	0.811	0.652
The Kinshasa ICH score (2012)	0.718	0.693-0.744	0.163	<0.001	0.388	6	0.593	0.795	0.737	0.669
Weimar' equation-I (2006)	0.717	0.692-0.742	0.164	<0.001	0.316	...	0.687	0.629	0.642	0.676
Shaya's score (2005)	0.696	0.670-0.722	0.185	<0.001	0.350	2	0.584	0.766	0.707	0.656
Safatli's score (2016)	0.607	0.579-0.634	0.274	<0.001	0.213	0	0.245	0.967	0.880	0.570

*Δ AUROC denotes the difference in AUROC between the ICH-FOS and compared scores with regard to mortality and poor functional outcome at 3-month after ICH.

& P value of comparing paired AUROC with Delong's method.

Abbreviation: ICH, Intracerebral Hemorrhage; AUROC, Area Under the Receiver Operating Characteristic Curve; CI, Confidence Interval; PPV, Positive Predictive Value; NPV, Negative Predictive Value.

Additional table 4. Calibration of ICH risk models with regard to mortality and functional outcome at 1-month after ICH (n=1575)

International ICH models	Goodness of fit test with regard to mortality at 1-month after onset			International ICH models	Goodness of fit test with regard to poor functional outcome (mRS $\geq$ 3) at 1-month after onset		
	P value	Cox and Snell R ²	Nagelkerke R ²		P value	Cox and Snell R ²	Nagelkerke R ²
The ICH-FOS (2013)	>0.05	0.248	0.392	The ICH-FOS (2013)	>0.05	0.366	0.496
The simplified ICH score (2009)	>0.05	0.245	0.388	max-ICH (2017)	>0.05	0.326	0.442
The modified ICH Score (2003)	>0.05	0.231	0.366	The modified ICH Score (2003)	>0.05	0.262	0.355
CAA- ICH score (2016)	>0.05	0.229	0.362	The IVH score (2010)	>0.05	0.249	0.337
The GP on STAGE score (2006)	>0.05	0.228	0.357	The FUNC Score (2008)	>0.05	0.235	0.319
Lisk's equation (1994)	>0.05	0.218	0.345	The MICH Score (2008)	>0.05	0.234	0.318
The ICH index (2012)	>0.05	0.217	0.343	The ICH-GS (2007)	>0.05	0.215	0.292
The original ICH Score (2001)	>0.05	0.191	0.302	The ICH index (2012)	>0.05	0.212	0.287
Weimar' equation-I (2006)	>0.05	0.035	0.056	Hallevy's score (2002)	<0.05	0.292	0.396
The ICH-GS (2007)	<0.05	0.192	0.34	The Essen ICH score (2006)	<0.05	0.345	0.468
Weimar' equation-II (2009)	<0.05	0.247	0.391	ICHOP (2018)	<0.05	0.325	0.441
The EDICH score (2014)	<0.05	0.242	0.384	Weimar' equation-II (2009)	<0.05	0.277	0.376
The Essen ICH score (2006)	<0.05	0.236	0.374	The GP on STAGE score (2006)	<0.05	0.252	0.342
Huang's score (2008)	<0.05	0.231	0.366	Lisk's equation (1994)	<0.05	0.248	0.336
ICHOP (2018)	<0.05	0.227	0.359	Mase's equation (1995)	<0.05	0.239	0.324
Broderick's score (1993)	<0.05	0.216	0.342	CAA- ICH score (2016)	<0.05	0.228	0.310
Mase's equation (1995)	<0.05	0.198	0.313	The simplified ICH score (2009)	<0.05	0.214	0.291
The FUNC Score (2008)	<0.05	0.197	0.312	Huang's score (2008)	<0.05	0.206	0.280
The MICH Score (2008)	<0.05	0.185	0.294	The original ICH Score (2001)	<0.05	0.199	0.271
max-ICH (2017)	<0.05	0.182	0.289	The EDICH score (2014)	<0.05	0.206	0.280
The IVH score (2010)	<0.05	0.181	0.287	Broderick's score (1993)	<0.05	0.196	0.266
Ho's score (2016)	<0.05	0.167	0.264	Ho's score (2016)	<0.05	0.183	0.248

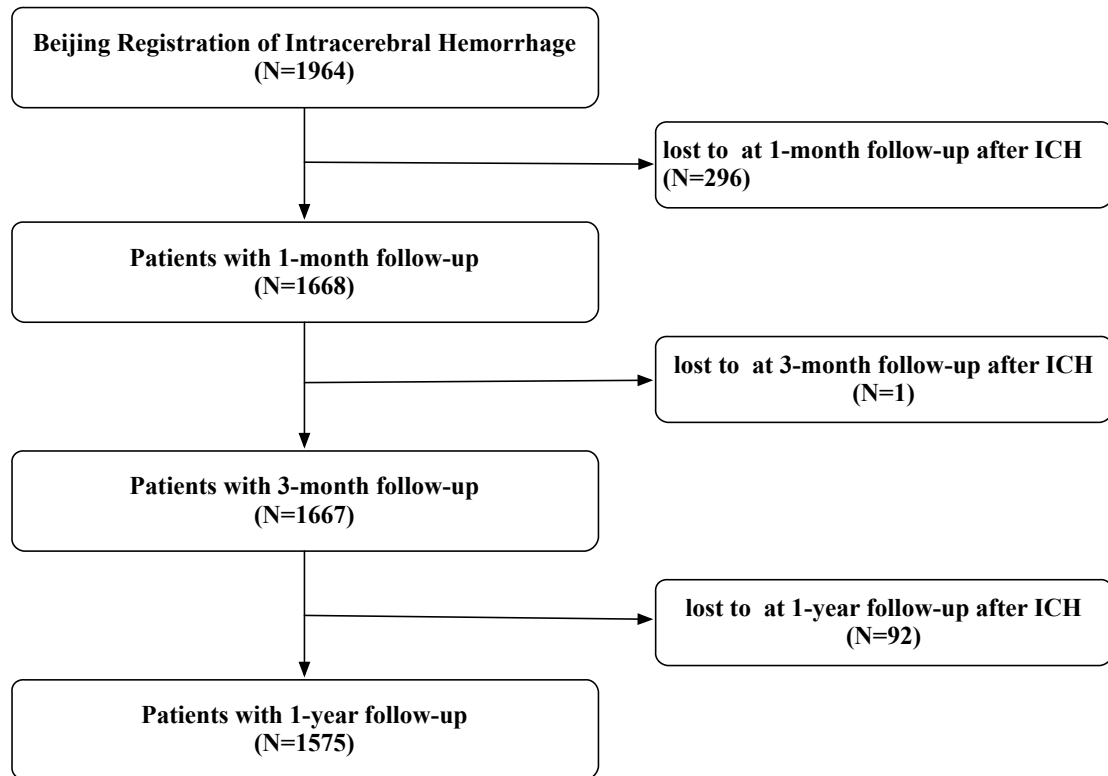
Tuhrim's equation (1991)	<0.05	0.142	0.225	Tuhrim's equation (1991)	<0.05	0.172	0.234
Hallevy's score (2002)	<0.05	0.139	0.221	Shaya's score (2005)	<0.05	0.153	0.208
The Kinshasa ICH score (2012)	<0.05	0.079	0.125	The Kinshasa ICH score (2012)	<0.05	0.143	0.195
Shaya's score (2005)	<0.05	0.057	0.090	Weimar' equation-I (2006)	<0.05	0.088	0.120
Safatli's score (2016)	<0.05	0.051	0.082	Safatli's score (2016)	<0.05	0.077	0.104

Additional table 5. Calibration of ICH risk models with regard to mortality and functional outcome at 1-year after ICH (n=1575)

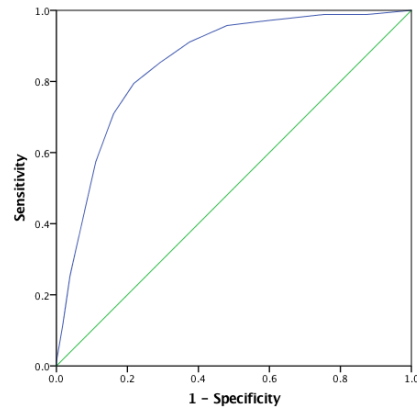
International ICH models	Goodness of fit test with regard to			International ICH models	Goodness of fit test with regard to		
	mortality at 1-year after onset				poor functional outcome (mRS≥3) at 1-year after onset		
	P value	Cox and Snell R ²	Nagelkerke R ²		P value	Cox and Snell R ²	Nagelkerke R ²
The ICH-FOS (2013)	>0.05	0.278	0.410	The ICH-FOS (2013)	>0.05	0.404	0.538
The Essen ICH score (2006)	>0.05	0.266	0.392	max-ICH (2017)	>0.05	0.380	0.507
Huang's score (2008)	>0.05	0.250	0.369	ICHOP (2018)	>0.05	0.330	0.440
Lisk's equation (1994)	>0.05	0.244	0.360	The modified ICH Score (2003)	>0.05	0.312	0.416
The GP on STAGE score (2006)	>0.05	0.243	0.358	The ICH-GS (2007)	>0.05	0.297	0.372
CAA- ICH score (2016)	>0.05	0.233	0.344	The FUNC Score (2008)	>0.05	0.288	0.384
ICHOP (2018)	>0.05	0.224	0.331	Huang's score (2008)	>0.05	0.285	0.381
The ICH index (2012)	>0.05	0.212	0.313	The MICH Score (2008)	>0.05	0.255	0.340
The original ICH Score (2001)	>0.05	0.205	0.303	The original ICH Score (2001)	>0.05	0.253	0.338
The MICH Score (2008)	>0.05	0.185	0.273	The ICH index (2012)	>0.05	0.233	0.311
The modified ICH Score (2003)	>0.05	0.146	0.215	The Essen ICH score (2006)	<0.05	0.388	0.514
Weimar' equation-I (2006)	>0.05	0.082	0.120	Lisk's equation (1994)	<0.05	0.308	0.410
The simplified ICH score (2009)	<0.05	0.239	0.353	Weimar' equation-I (2006)	<0.05	0.303	0.404
Weimar' equation-II (2009)	<0.05	0.238	0.352	The GP on STAGE score (2006)	<0.05	0.298	0.398
The EDICH score (2014)	<0.05	0.236	0.349	Hallevy's score (2002)	<0.05	0.297	0.396
max-ICH (2017)	<0.05	0.227	0.335	The IVH score (2010)	<0.05	0.297	0.396
The FUNC Score (2008)	<0.05	0.215	0.317	Mase's equation (1995)	<0.05	0.271	0.362
Broderick's score (1993)	<0.05	0.215	0.318	CAA- ICH score (2016)	<0.05	0.270	0.360
The ICH-GS (2007)	<0.05	0.214	0.317	The simplified ICH score (2009)	<0.05	0.263	0.350
The IVH score (2010)	<0.05	0.206	0.304	The EDICH score (2014)	<0.05	0.253	0.337
Mase's equation (1995)	<0.05	0.200	0.295	Ho's score (2016)	<0.05	0.235	0.313
Ho's score (2016)	<0.05	0.183	0.271	Broderick's score (1993)	<0.05	0.224	0.299

Hallevy's score (2002)	<0.05	0.177	0.261	Tuhrim's equation (1991)	<0.05	0.208	0.277
Tuhrim's equation (1991)	<0.05	0.145	0.214	The Kinshasa ICH score (2012)	<0.05	0.157	0.209
The Kinshasa ICH score (2012)	<0.05	0.079	0.116	Weimar' equation-I (2006)	<0.05	0.145	0.194
Shaya's score (2005)	<0.05	0.063	0.093	Shaya's score (2005)	<0.05	0.137	0.183
Safatli's score (2016)	<0.05	0.050	0.080	Safatli's score (2016)	<0.05	0.101	0.134

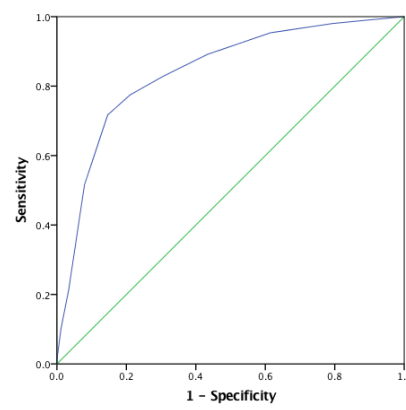
Additional figure 1. Flowchart of the study



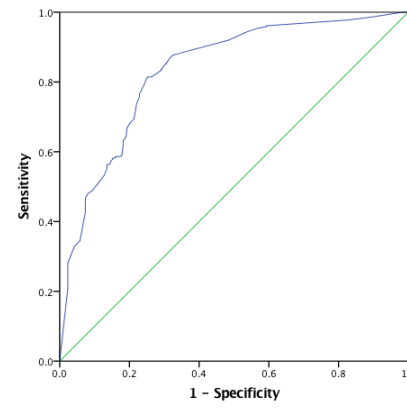
Additional figure 2. The area under the receiver operating characteristic curve of ICH risk models with regard to mortality at 3-month after ICH



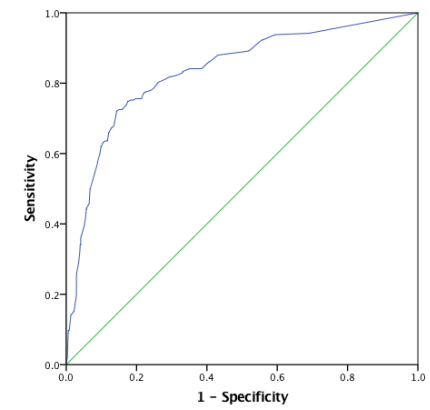
The ICH-FOS (2013)



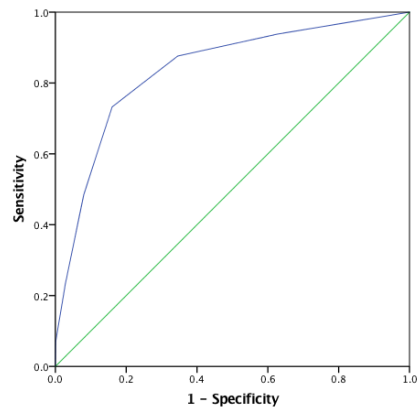
The Essen ICH score (2006)



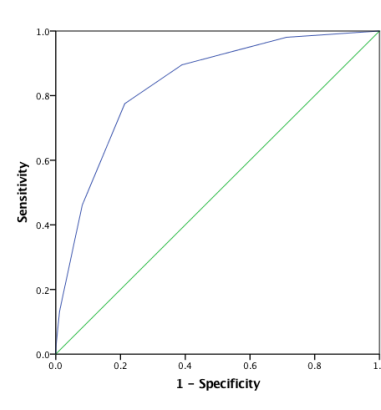
Weimar' equation-II (2009)



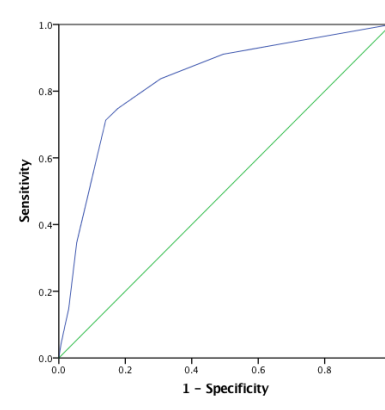
The GP on STAGE score (2006)



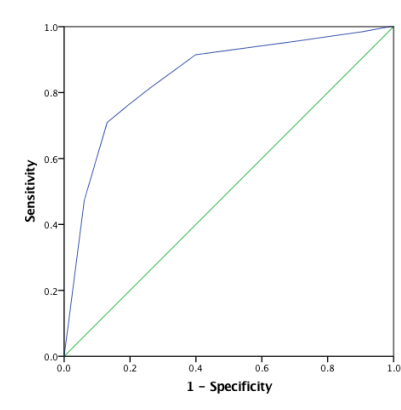
The EDICH score (2014)



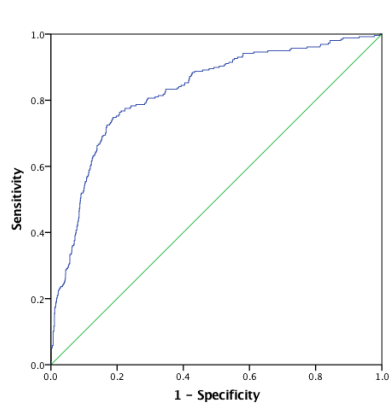
The modified ICH Score (2003)



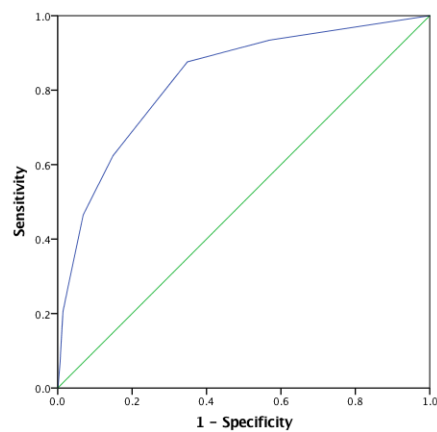
Huang's score (2008)



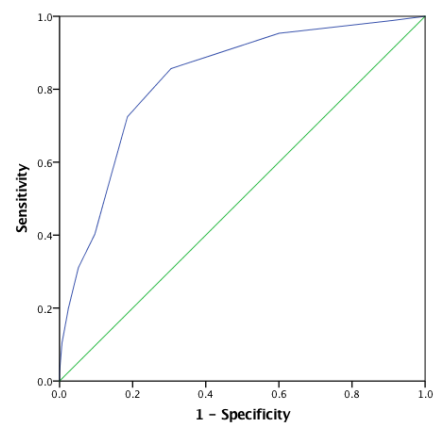
ICHOP (2018)



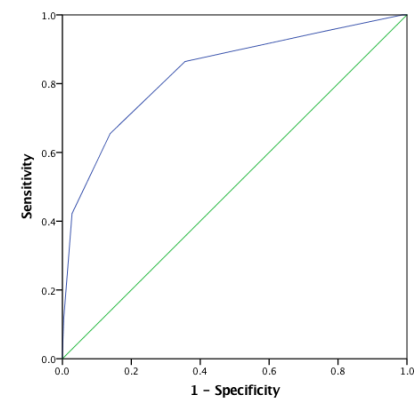
Lisk's equation (1994)



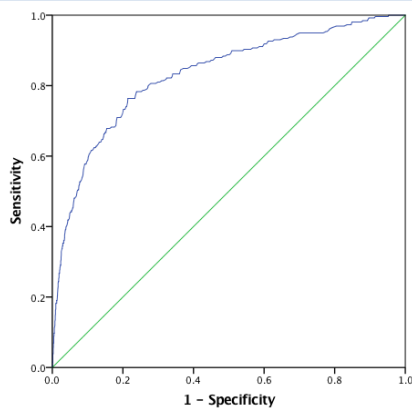
CAA- ICH score (2016)



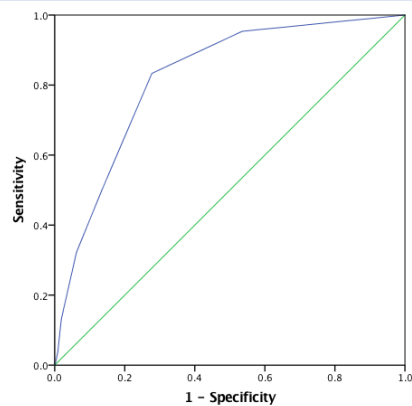
The FUNC Score (2008)



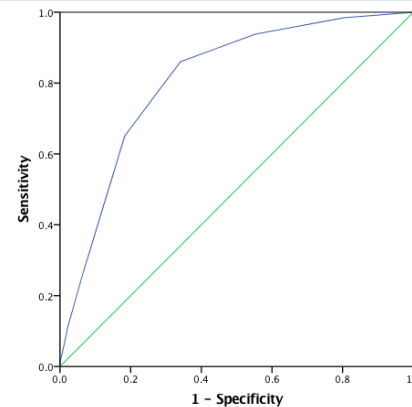
The simplified ICH score (2009)



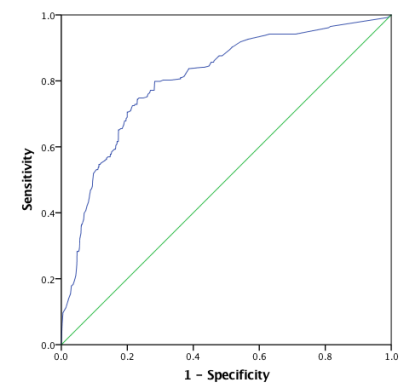
The ICH index (2012)



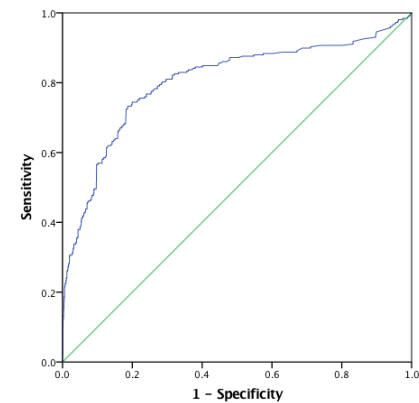
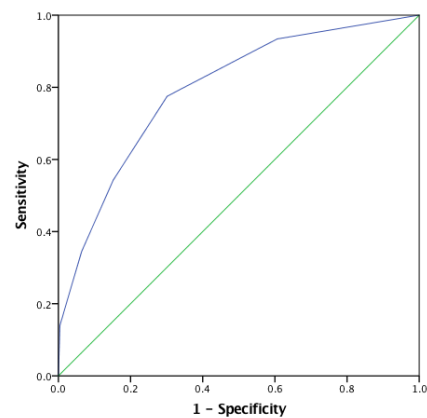
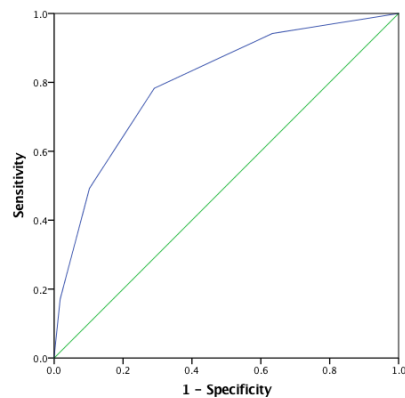
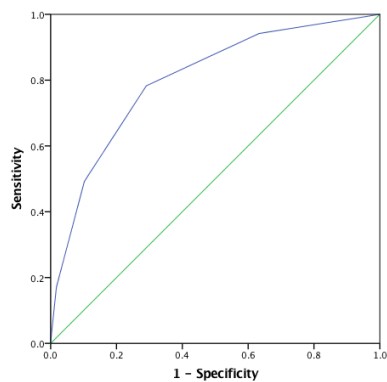
The IVH score (2010)



max-ICH (2017)



Mase's equation (1995)

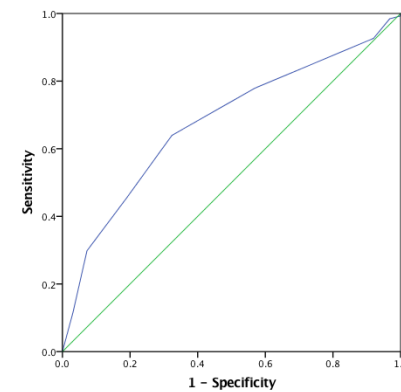
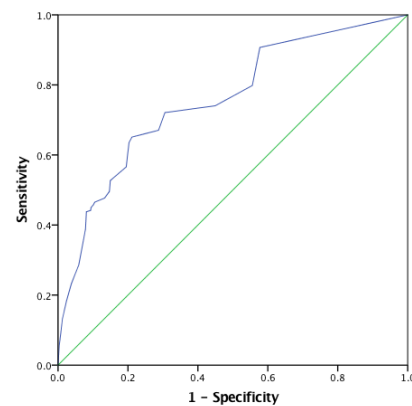
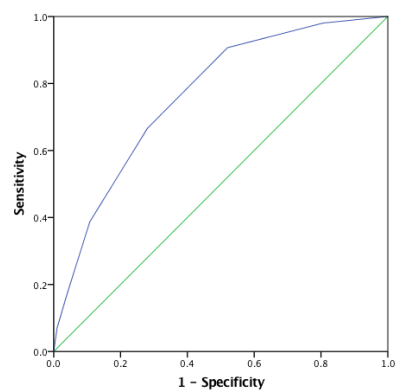
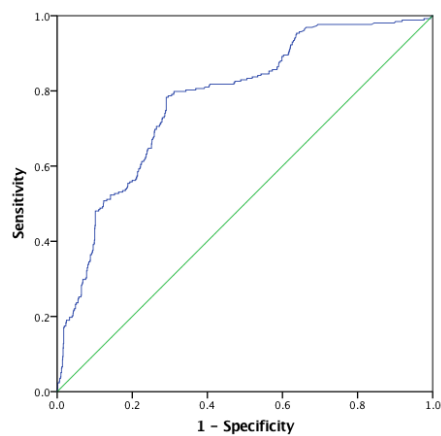


The original ICH Score (2001)

The ICH-GS (2007)

The MICH Score (2008)

Broderick's score (1993)

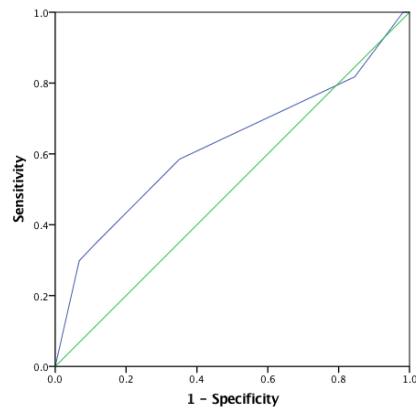


Ho's score (2016)

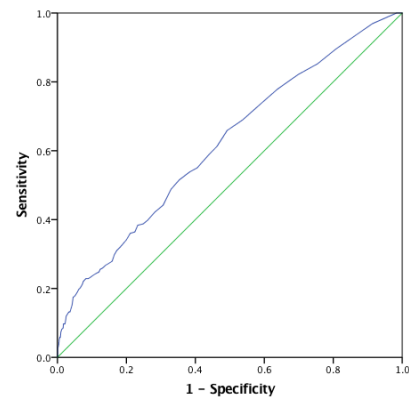
Hallevy's score (2002)

Tuhim's equation (1991)

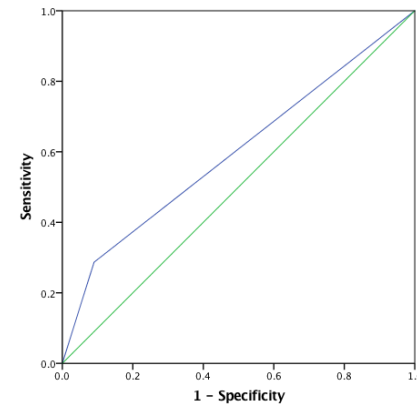
The Kinshasa ICH score (2012)



Shaya's score (2005)

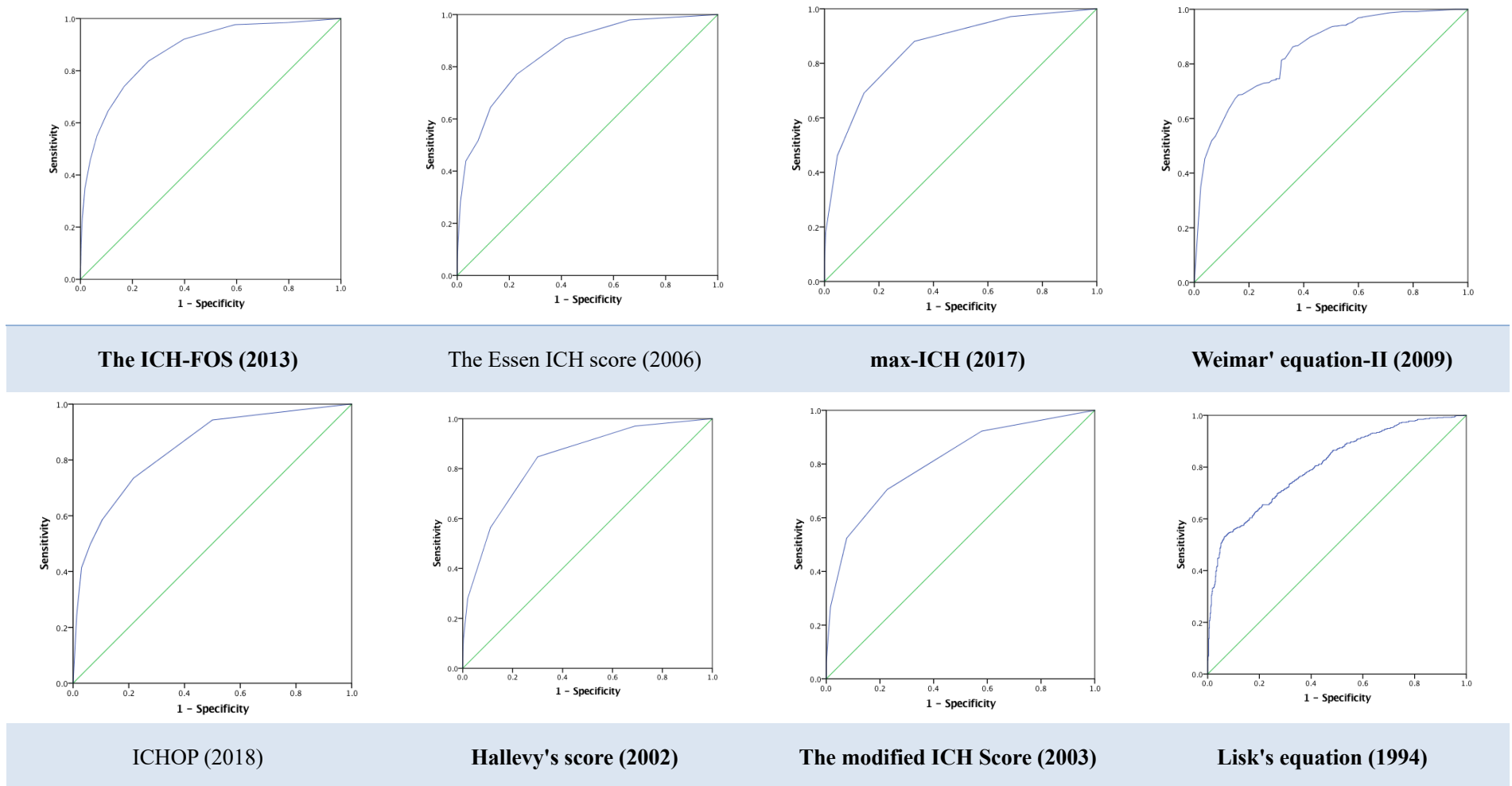


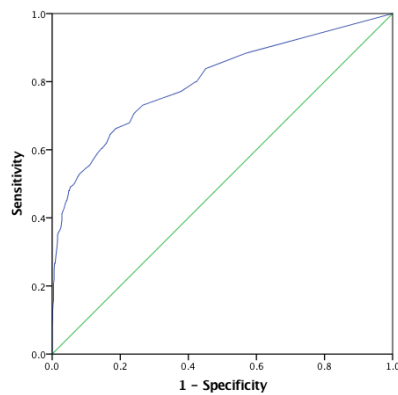
Weimar' equation-I (2006)



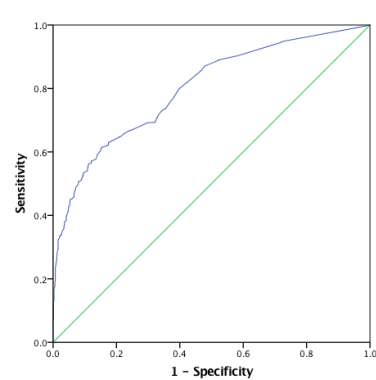
Safatli's score (2016)

Additional figure 3. The area under the receiver operating characteristic curve of ICH risk models with regard to poor functional outcome (mRS_{≥3}) at 3-month after ICH

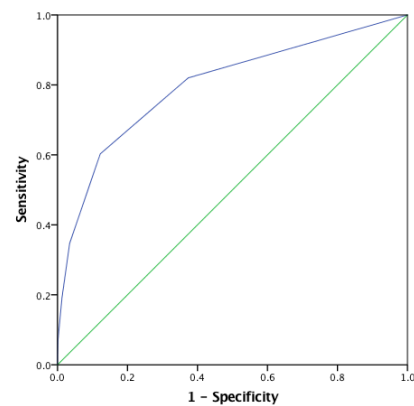




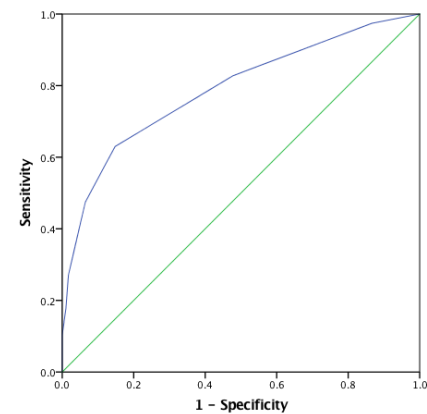
The GP on STAGE score (2006)



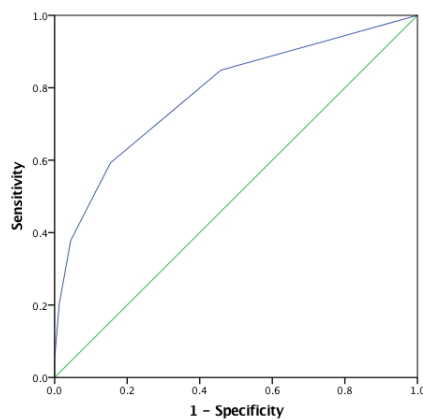
Mase's equation (1995)



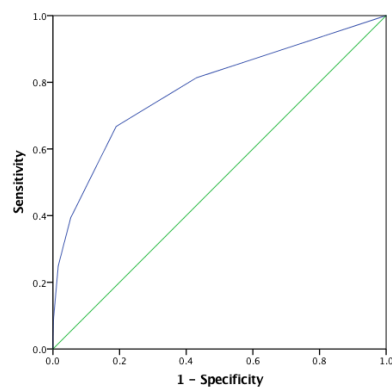
The IVH score (2010)



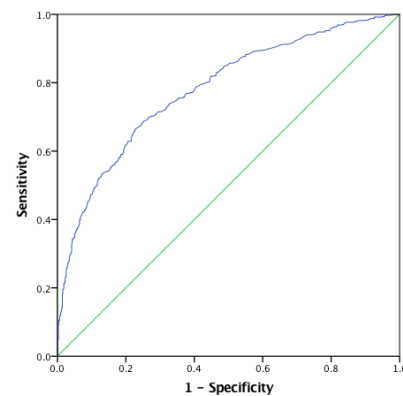
The FUNC Score (2008)



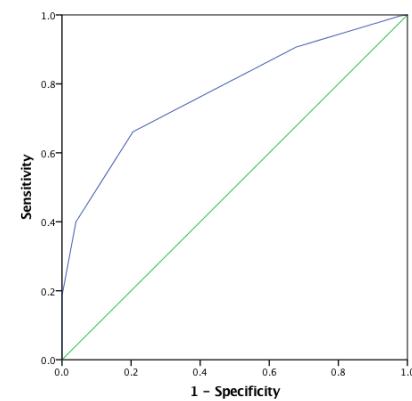
The MICH Score (2008)



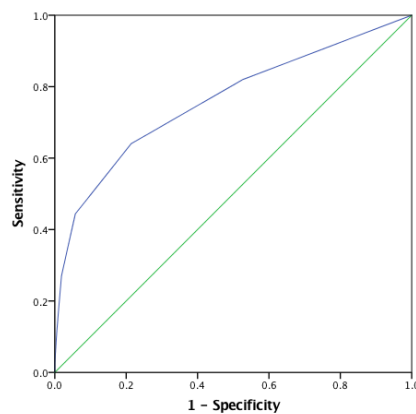
CAA- ICH score (2016)



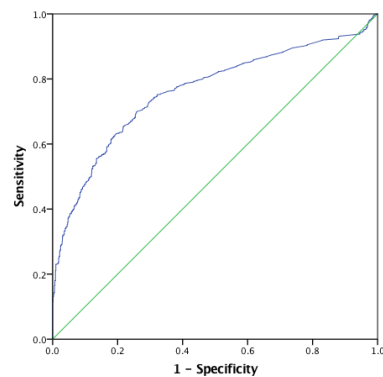
The ICH index (2012)



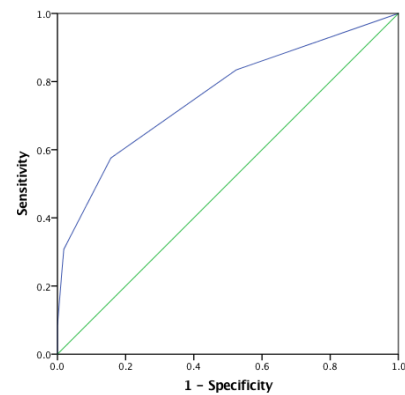
The simplified ICH score (2009)



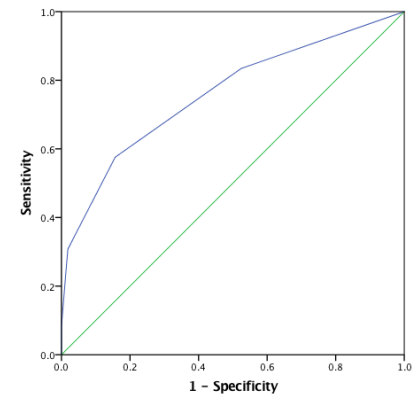
The EDICH score (2014)



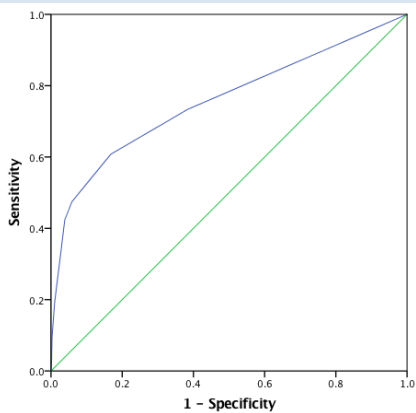
Broderick's score (1993)



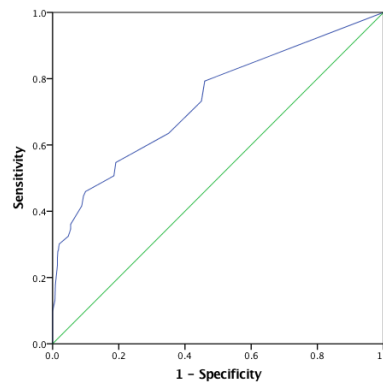
The original ICH Score (2001)



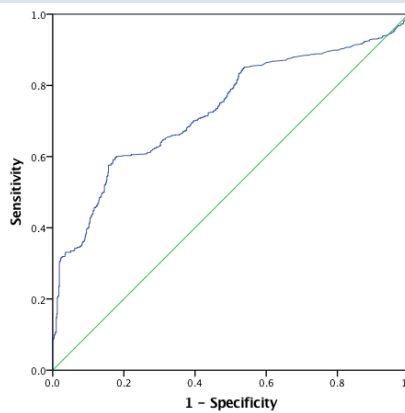
The ICH-GS (2007)



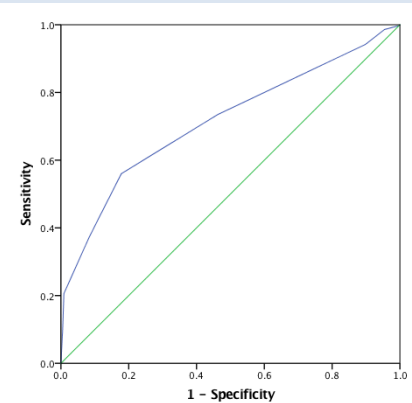
Huang's score (2008)



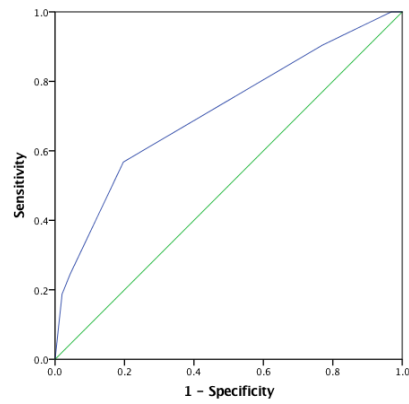
Tuhrim's equation (1991)



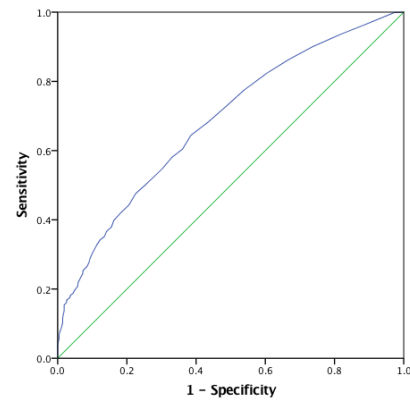
Ho's score (2016)



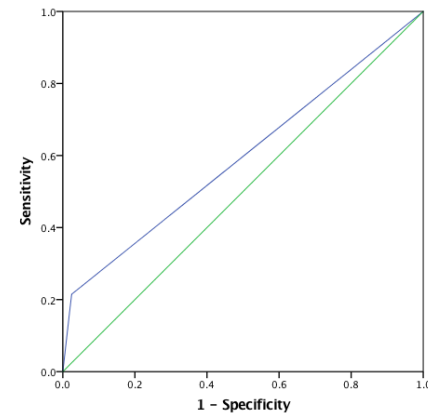
The Kinshasa ICH score (2012)



Shaya's score (2005)

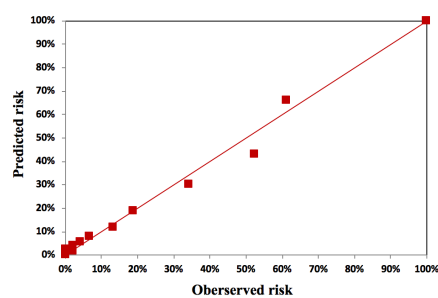


Weimar' equation-I (2006)

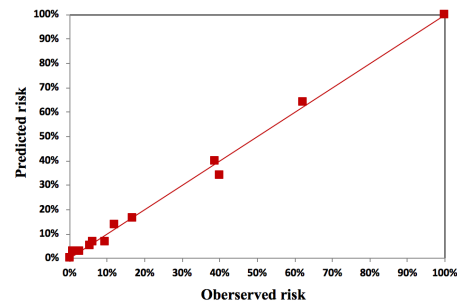


Safatli's score (2016)

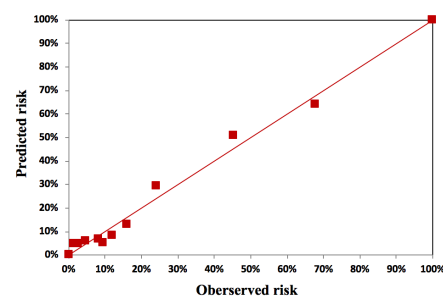
Additional figure 4. Plot of observed versus predicted risk with regard to mortality at 3-month after ICH



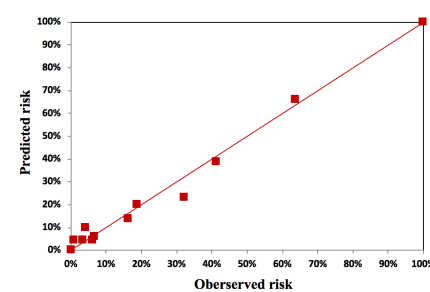
The ICH-FOS (2013)



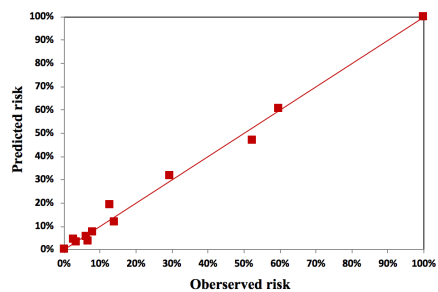
The modified ICH Score (2003)



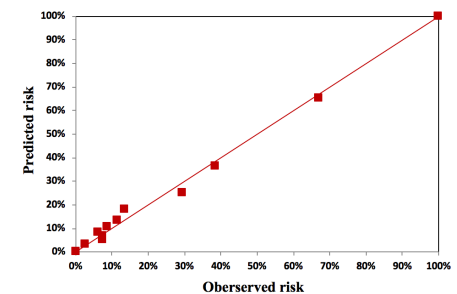
The GP on STAGE score (2006)



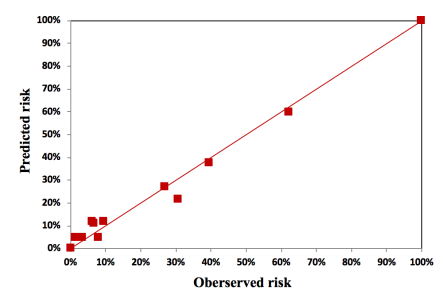
CAA- ICH score (2016)



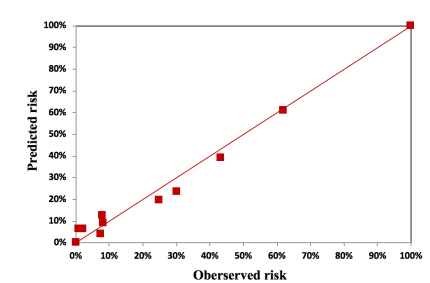
Lisk's equation (1994)



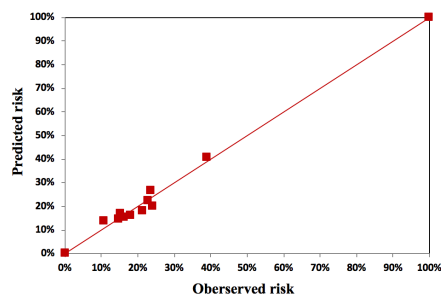
The ICH index (2012)



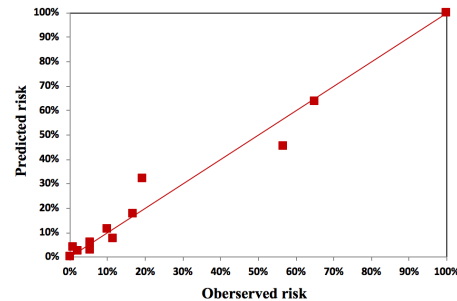
The original ICH Score (2001)



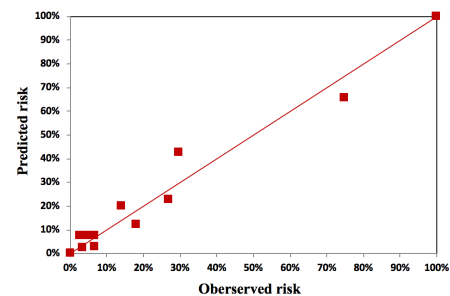
The ICH-GS (2007)



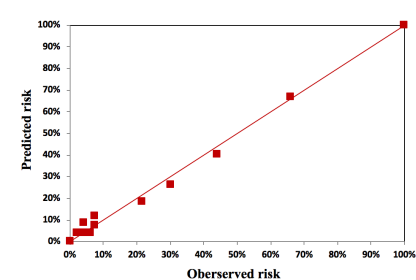
Weimar' equation-I (2006)



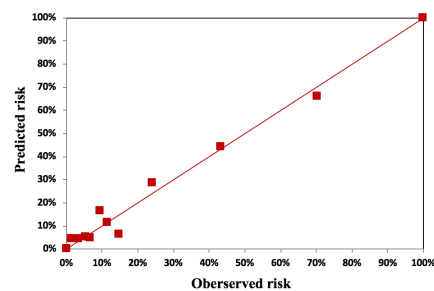
The Essen ICH score (2006)



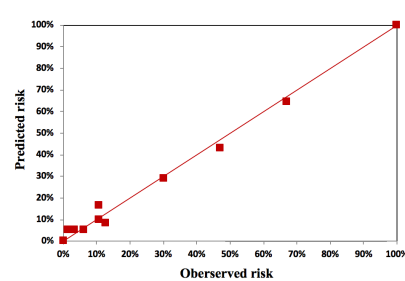
The simplified ICH score (2009)



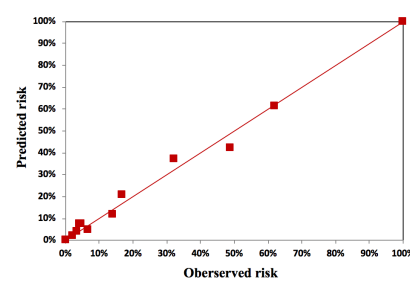
The EDICH score (2014)



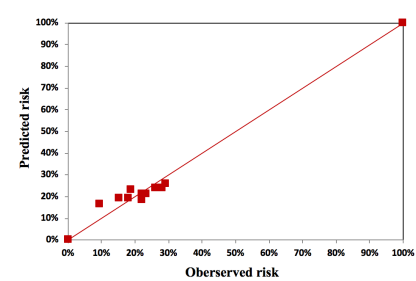
Weimar' equation-II (2009)



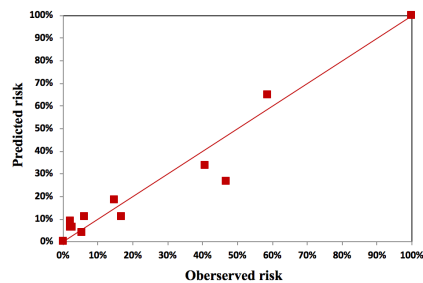
Huang's score (2008)



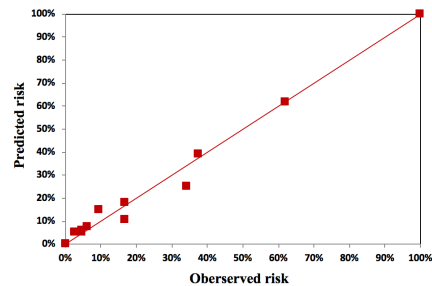
ICHOP (2018)



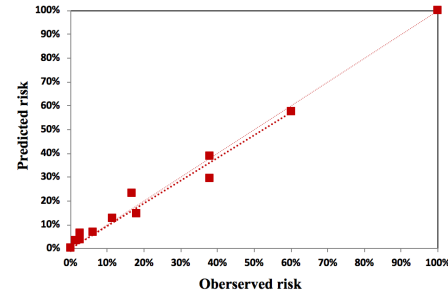
Broderick's score (1993)



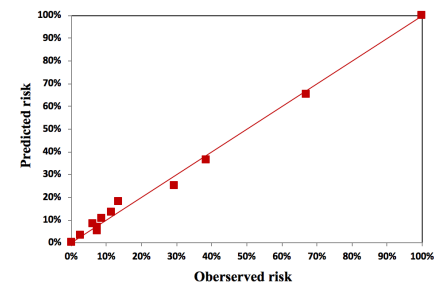
The FUNC Score (2008)



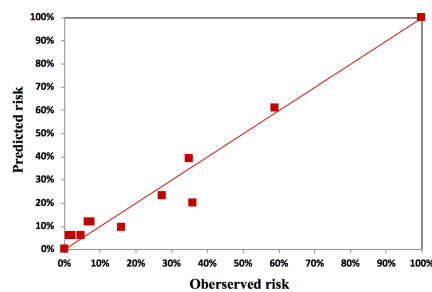
Mase's equation (1995)



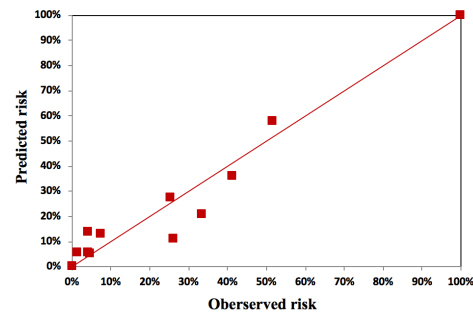
max-ICH (2017)



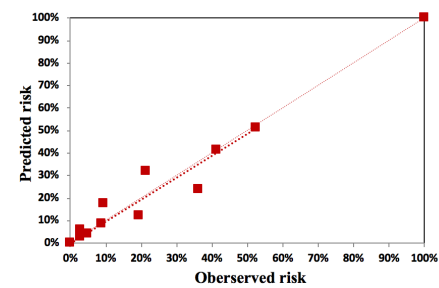
The IVH score (2010)



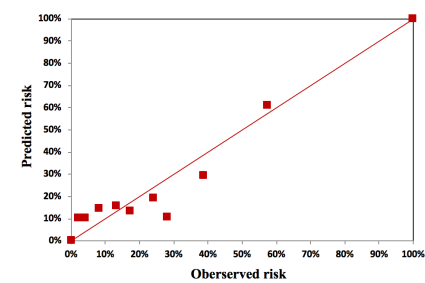
The MICH Score (2008)



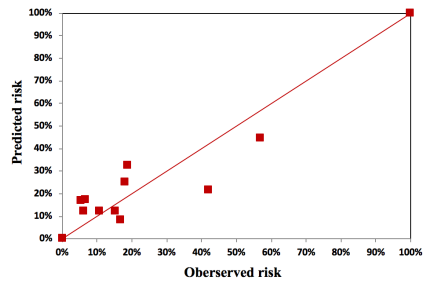
Ho's score (2016)



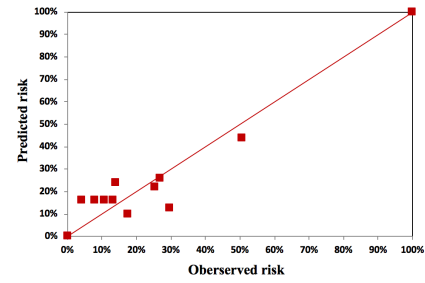
Hallevy's score (2002)



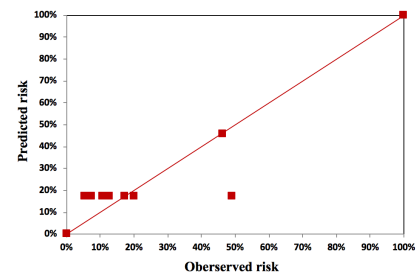
Tuhrim's equation (1991)



The Kinshasa ICH score (2012)

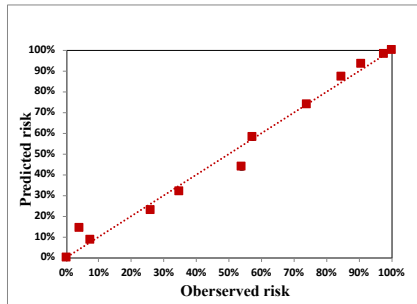


Shaya's score (2005)

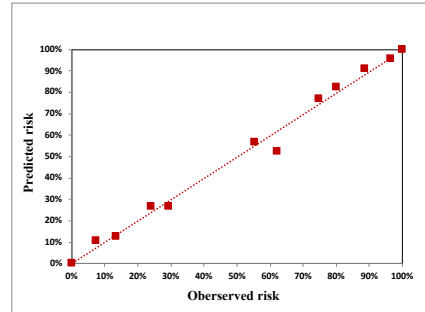


Safatli's score (2016)

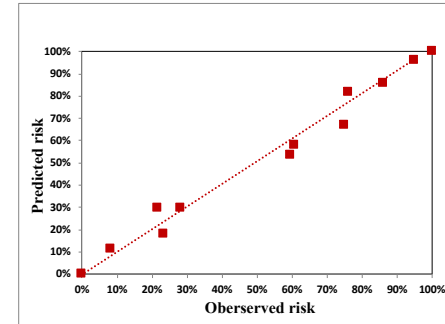
Additional figure 5. Plot of observed versus predicted risk with regard to poor functional outcome ($mRS \geq 3$) at 3-month after ICH



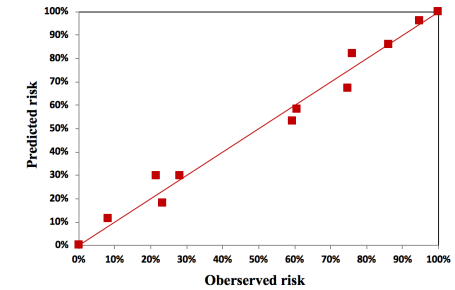
The ICH-FOS (2013)



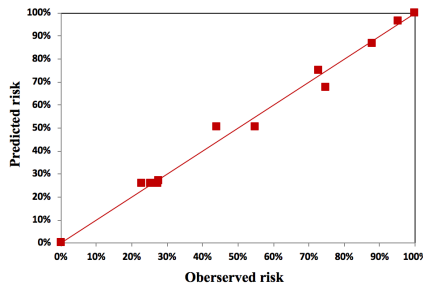
max-ICH (2017)



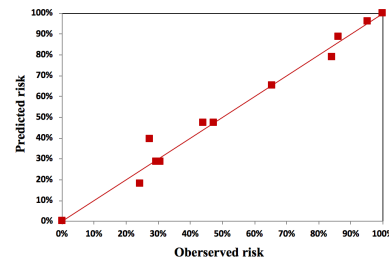
Hallevy's score (2002)



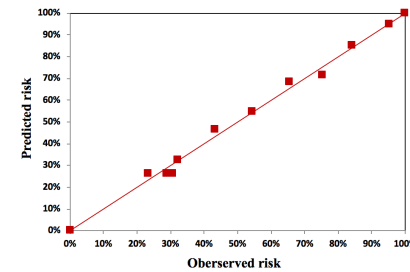
The modified ICH Score (2003)



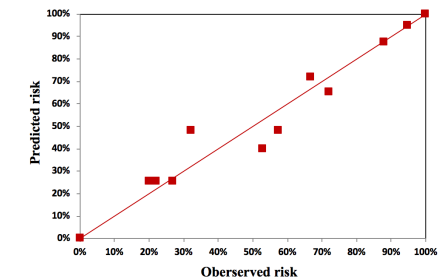
The IVH score (2010)



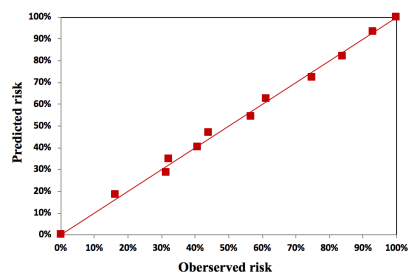
The FUNC Score (2008)



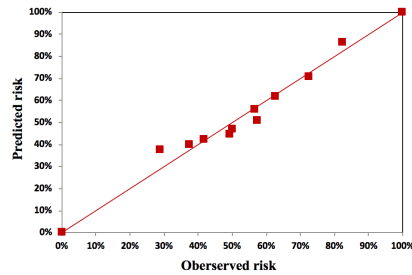
CAA- ICH score (2016)



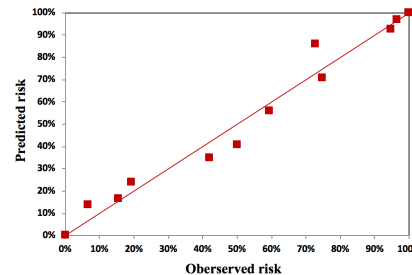
The MICH Score (2008)



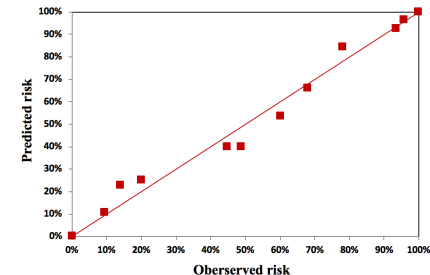
The ICH index (2012)



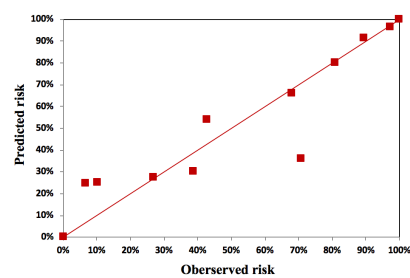
Weimar' equation-I (2006)



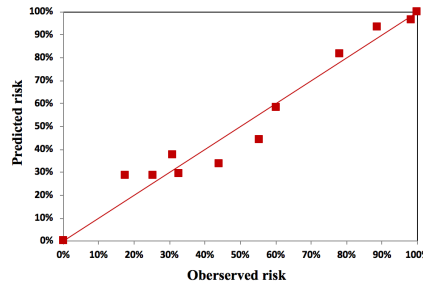
The Essen ICH score (2006)



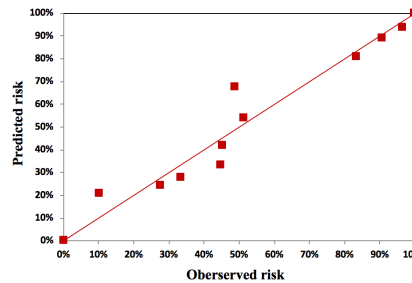
ICHOP (2018)



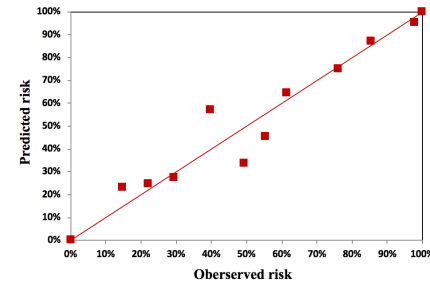
Weimar' equation-II (2009)



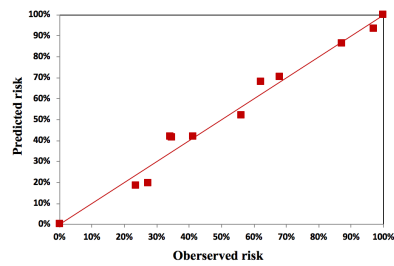
The GP on STAGE score (2006)



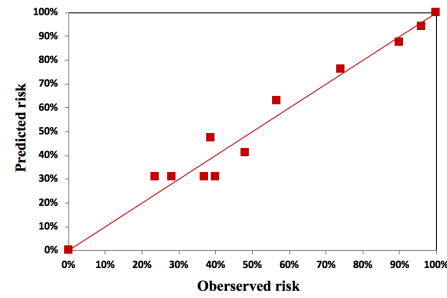
Lisk's equation (1994)



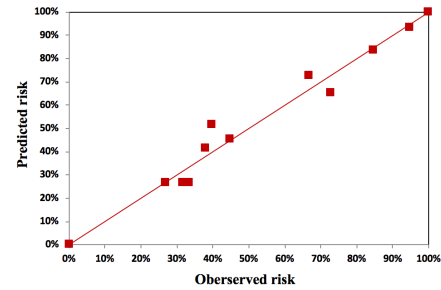
Mase's equation (1995)



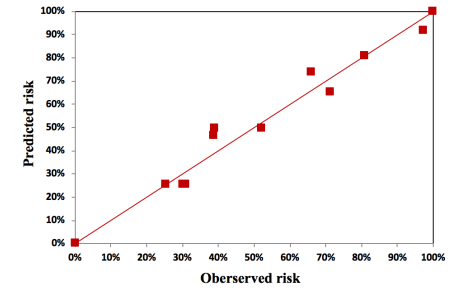
The simplified ICH score (2009)



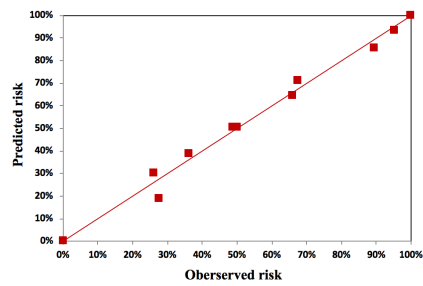
Huang's score (2008)



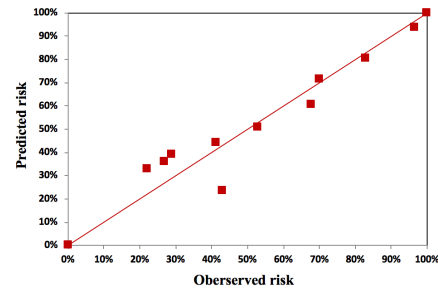
The EDICH score (2014)



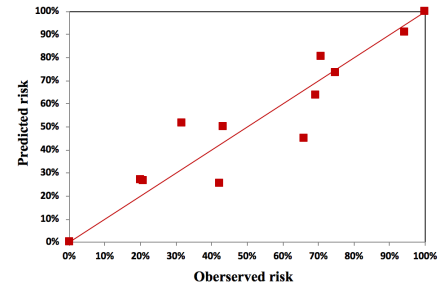
The original ICH Score (2001)



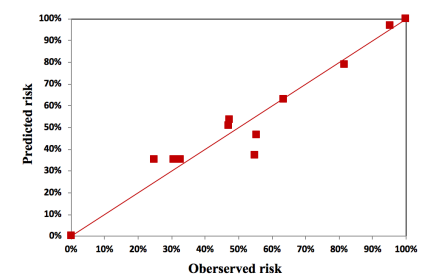
The ICH-GS (2007)



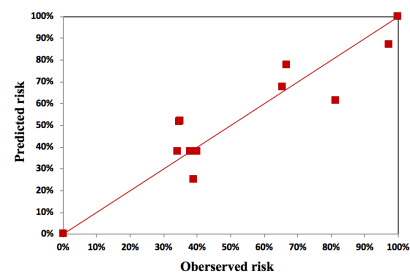
Broderick's score (1993)



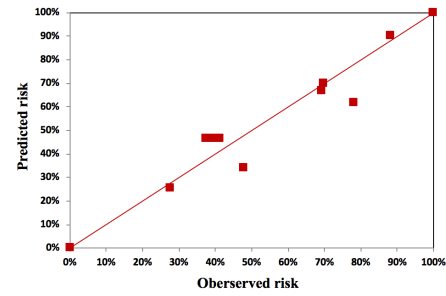
Ho's score (2016)



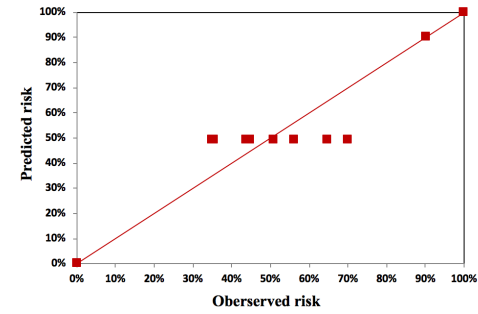
Tuhim's equation (1991)



The Kinshasa ICH score (2012)



Shaya's score (2005)



Safatli's score (2016)

Additional figure 6: traditional model (A) and precision model (B) for conducting ICH randomized controlled trials.

