

Supplementary Table 4. Definition of variables used in the risk score definition of HAS-BLED based on associated morbidities and concomitant drug

Modified HASBLED	ICD-9	ICD-10
Ischemic stroke	433.xx, 434.xx, 436	I63 except I63.6, I67.89
Transient ischemic-attack	435.x	G45
Moderate to severe renal disease	404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 580.0, 580.4, 581.0, 581.1, 581.2, 581.3, 581.89, 581.9, 582.0, 582.1, 582.2, 582.89, 582.9, 583.0, 583.1, 583.2, 583.4, 583.7, 583.6, 583.89, 583.9, 584.5, 584.6, 584.7, 584.8, 584.9, 585.1, 585.2, 585.3, 585.4, 585.5, 585.6, 586, 590.0, 590.01, 590.80	I12, I13, N00, N01, N02, N03, N04, N05, N07, N11, N12, N14, N17, N18, N19
Moderate to severe liver disease	570, 572.3, 070.0, 070.21, 070.20, 070.60	K7200, K762, K766, B150, B160, B162, B190, K704, I85
Haemorrhagic stroke intracranial (non-traumatic)	430, 431, 432.x	I60, I61, I62
Extracranial major or unclassified major bleeding	Upper GI: 456.1, 530.7, 531.0x, 531.2x, 531.4x, 531.6x, 532.0x, 532.2x, 532.4x, 532.6x, 533.0x, 533.2x, 533.4x, 533.6x, 534.0x, 534.2x, 534.4x, 534.6x, 535.01, 537.83, 578.0 Lower GI: 562.02, 562.03, 562.12, 562.13, 569.3x, 569.85, 578.1x, 578.9 Other sites: 626.2x and 280.0, 285.1 or 285.9 599.7, 786.3x, 379.23, 719.1x, 423.0x, 568.8, 459.0x, 285.1x	Upper GI: I850, K226, K250, K252, K254, K256, K260, K262, K264, K266, K270, K272, K274, K276, K280, K282, K284, K286, K2901, K290, K31811, K920 Lower GI: K921, K922, K5711, K5713, K5731, K5733, K625, K5521 Other sites: N92.0 and D50.0 or D62 or D64.9, R31, R042, R0489, R049, H43.13, M250x, I31.2, K66.1, R58.0, D62
Gastrointestinal bleeding	Upper GI: 531.0x, 531.2x, 531.4x, 531.6x, 532.0x, 532.2x, 532.4x, 532.6x, 533.0x, 533.2x, 533.4x, 533.6x, 534.0x, 534.2x, 534.4x, 534.6x, 535.01, 537.83, 578.0 Lower GI: 562.02, 562.03, 562.12, 562.13, 569.3x, 569.85, 578.1x, 578.9	Upper GI: K250, K252, K254, K256, K260, K262, K264, K266, K270, K272, K274, K276, K280, K282, K284, K286, K2901, K290, K31811, K920 Lower GI: K921, K922, K5711, K5713, K5731, K5733, K625, K5521
Traumatic intracranial bleeding	852x, 853x	S063, S064, S065, S066
Clopidrogel, ticlopidine, prasugrel, ticagrelor	46486, 47307, 45617, 47402, 47834, 47866	46486, 47307, 45617, 47402, 47834, 47866
Low dose ASA	00143, 46353 (daily dose <100 mg)	00143, 46353 (daily dose <100 mg)
Nonsteroidal anti-inflammatory drugs	46353, 38184, 47327, 47078, 41694, 47059, 43150, 47122, 33803, 44749, 04745, 46654, 47506, 04810, 38691, 44359, 47385, 47084, 19752, 47890, 07462, 42019, 47346, 47107, 40381, 45592, 45407, 03766	46353, 38184, 47327, 47078, 41694, 47059, 43150, 47122, 33803, 44749, 04745, 46654, 47506, 04810, 38691, 44359, 47385, 47084, 19752, 47890, 07462, 42019, 47346, 47107, 40381, 45592, 45407, 03766
Alcohol	331.7, 359.4, 425.5, 577.1	E224, E529A, F10, G312, G612, G721, I426, K292, K70, K860, L278A, O354, T51, Z714, Z721

ICD, International Classification of Diseases; ASA, acetylsalicylic acid.