**Table S1.** Severity distributions (%) for stroke events by treatment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Mild** | **Moderate** | **Severe** | **Fatal** | **Reference** |
| **Ischemic stroke** |  |  |  |  |  |
| Apixaban | 53 | 21 | 8 | 18 | Secondary analysis of ARISTOTLE |
| Warfarin | 45 | 30 | 10 | 15 | Secondary analysis of ARISTOTLE |
| Dabigatran | 35 | 26 | 9 | 30 | Weighted average of 110/150mg dosesa |
| Dabigatran 110a | 35 | 28 | 10 | 27 | RELY (Connolly et al. 2009) |
| Dabigatran 150a | 35 | 22 | 8 | 35 | RELY (Connolly et al. 2009) |
| Rivaroxaban | 49 | 18 | 6 | 27 | ROCKET-AF (Patel et al. 2011) |
| Recurrent strokeb, all | 53 | 21 | 8 | 18 | Assumed equal to apixaban. |
| **Haemorrhagic stroke (HS)** |  |  |  |  |  |
| Apixaban | 23 | 32 | 10 | 35 | Secondary analysis of ARISTOTLE |
| Warfarin | 20 | 15 | 12 | 53 | Secondary analysis of ARISTOTLE |
| Dabigatran | 35 | 26 | 9 | 30 | Weighted average of 110/150mg dosesa |
| Dabigatran 110 | 35 | 28 | 10 | 27 | RELY (Connolly et al. 2009) |
| Dabigatran 150 | 35 | 22 | 8 | 35 | RELY (Connolly et al. 2009) |
| Rivaroxaban | 49 | 18 | 6 | 27 | ROCKET-AF (Patel et al. 2011) |
| Recurrent HSb, all | 23 | 32 | 10 | 35 | Assumed equal to apixaban. |

a57.6% and 42.4% of the patients in NAXOS study used dabigatran at a dose of 110mg and 150mg, respectively. bRate 2.72 per 100 py (Easton et al. 2012)

**Table S2.** Event type distributions (%) within intracranial haemorrhages and other major bleeds for compared treatments.

|  |  |  |  |
| --- | --- | --- | --- |
| **Intracranial haemorrhages** | **HS** | **Other ICH** | **Reference** |
| Apixaban | 32 | 68 | Lip et al. 2018 |
| Warfarin | 37 | 63 | Lip et al. 2018 |
| Dabigatran | 29 | 71 | Lip et al. 2018 |
| Rivaroxaban | 35 | 65 | Lip et al. 2018 |
| **Other major bleeds** | **GI** | **Non-GI** | **Reference** |
| Apixaban | 53 | 47 | Lip et al. 2018 |
| Warfarin | 53 | 47 | Lip et al. 2018 |
| Dabigatran | 56 | 44 | Lip et al. 2018 |
| Rivaroxaban | 53 | 47 | Lip et al. 2018 |

GI, gastrointestinal; HS, hemorrhagic stroke; ICH, intracranial hemorrhage

**Table S3.** Applied case fatality rates and mortality adjustment factors.

|  |  |  |
| --- | --- | --- |
| **Case fatality** | **%** | **Reference** |
| Other ICH | 13.0 | ARISTOTLE |
| Other major bleed | 2.0 | ARISTOTLE |
| MI, female | 16.9 | Hallinen et al. 2016 |
| MI, male | 14.2 | Hallinen et al. 2016 |
| Systemic embolism | 10.5 | Hallinen et al. 2016 |
| **Risk-adjustment factor per decade of life** |  |  |
| Stroke | 1.46 | Pisters et al. 2012 |
| Bleeding events | 1.97 | Ariesen et al. 2003, as in Hallinen et al. 2016 |
| MI | 1.30 | Expert Panel on Detection… 2001, as in Hallinen et al. 2016 |
| **Mortality adjustment factors** | **HR** |  |
| **Atrial fibrillation** | 1.300 | Weighted average, as in Hallinen 2016 |
| **Stroke (IS and HS)** |  |  |
| mild | 1.386 | Hallinen et al. 2016 |
| moderate | 2.440 | Hallinen et al. 2016 |
| severe | 6.384 | Hallinen et al. 2016 |
| **Myocardial infarction** |  |  |
| Females | 1.740 | Hallinen et al. 2016 |
| Males | 2.330 | Hallinen et al. 2016 |
| **Systemic embolism** | 1.300 | Hallinen et al. 2016 |

HR, hazard ratio; HS, hemorrhagic stroke; ICH, intracranial hemorrhage; IS, ischemic stroke; MI, myocardial infarction.

**References:**

Patel M, Mahaffey K, Garg J, et al. Rivaroxaban versus warfarin in nonvalvular atrial fibrillation. N Engl J Med. 2011;365:883-891.

Connolly SJ, Ezekowitz MD, Yusuf S, et al. Dabigatran versus warfarin in patients with atrial fibrillation. N Engl J Med. Sep 17 2009;361(12):1139-1151.

Lip GYH, Keshishian A, Li X, et al. Effectiveness and Safety of Oral Anticoagulants Among Nonvalvular Atrial Fibrillation Patients. *Stroke*. 2018;49(12):2933-2944.

Hallinen T, Soini EJ, Linna M, Saarni SI. Cost-effectiveness of apixaban and warfarin in the prevention of thromboembolic complications among atrial fibrillation patients. *Springerplus*. 2016 Aug 17;5(1):1354.

Ariesen MJ, Claus SP, Rinkel GJ, Algra A. Risk factors for intracerebral hemorrhage in the general population: a systematic review. *Stroke*. 2003;34(8):2060-5.

Easton JD, Lopes RD, Bahit MC, et al. Committees A, Investigators. Apixaban compared with warfarin in patients with atrial fibrillation and previous stroke or transient ischaemic attack: a subgroup analysis of the ARISTOTLE trial. *Lancet Neurol*. 2012;11:503–511.

Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive Summary of The Third Report of The National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, And Treatment of High Blood Cholesterol In Adults (Adult Treatment Panel III). *JAMA*. 2001;285(19):2486-97.

Pisters R, Lane DA, Marin F, Camm AJ, Lip GY. Stroke and thromboembolism in atrial fibrillation. *Circ J*. 2012;76(10):2289-304.