**Supplemental table 1**

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| **Outcome** | **ICD-10 codes** |
| Stroke | I63\*, I64 |
| Systemic embolism | I74 |
| Hemorrhagic stroke | I60, I61 |
| Major bleeding | D500, D62, I62, I850, I864A, K250, K252, K254, K256, K260, K262, K264, K266, K270, K272, K274, K276, K280, K282, K284, K286, K290, K299A, K625, K929, K921, K922, J942, R04, N02, R31, R58  |
| Cardiovascular death | I00-28, I30-51, I60-99 |

**Supplemental table 2; Sensitivity analyses with all analyses restricting the DOAC-cohort to patients who were adherent to DOAC first 60 days without bleeding admissions in this period.**

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| --- | --- | --- | --- | --- |
|  | No. of events | Event-rates (events/100 pt.yrs) | Hazard rate ratios | p-value |
| LAAO | DOAC | LAAO | DOAC |
| Adjusting for stroke on oral anticoagulation. LAAO; n=299, DOAC; n=299 |
| Composite outcome | 65 | 105 | 12.69 | 22.01 | 0.58 (0.43-0.79) | 0.001 |
| Ischemic stroke | 16 | 16 | 2.99 | 3.2 | 0.94 (0.47-1.88) | 0.87 |
| Major bleeding | 22 | 33 | 4.15 | 6.80 | 0.63 (0.37-1.08) | 0.09 |
| All-cause mortality | 37 | 72 | 6.71 | 13.64 | 0.49 (0.33-0.73) | <0.001 |
| CV mortality | 18 | 29 | 3.26 | 5.49 | 0.60 (0.33-0.1.07) | 0.08 |
| Excluding patients with prior cancer in the DOAC cohort. LAAO; n=299, DOAC; n=288 |
| Composite outcome | 65 | 83 | 12.69 | 17.11 | 0.74 (0.53-1.03) | 0.075 |
| Ischemic stroke | 16 | 13 | 2.99 | 2.62 | 1.14 (0.55-2.36) | 0.72 |
| Major bleeding | 22 | 27 | 4.15 | 5.50 | 0.76 (0.44-1.34) | 0.34 |
| All-cause mortality | 37 | 52 | 6.71 | 9.87 | 0.68 (0.45-1.04) | 0.07 |
| CV mortality | 18 | 19 | 3.26 | 3.66 | 0.89 (0.47-1.69) | 0.19 |
| Adjusting for time from stroke to LAAO or DOAC treatment. LAAO; n=299, DOAC; n=299 |
| Composite outcome | 54 | 91 | 12.11 | 20.76 | 0.59 (0.42-0.83) | 0.002 |
| Ischemic stroke | 13 | 17 | 2.80 | 3.53 | 0.80 (0.39-1.65) | 0.54 |
| Major bleeding | 20 | 32 | 4.35 | 7.08 | 0.63 (0.36-1.10) | 0.11 |
| All-cause mortality | 30 | 60 | 6.26 | 12.39 | 0.51 (0.33-0.78) | <0.001 |
| CV mortality | 17 | 27 | 3.55 | 5.49 | 0.65 (0.35-1.19) | 0.16 |

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| **Suppl. Table 3** | **DOAC adherence > 60days** | **Adjustment; stroke on treatment** | **Exclusion of cancer patients analysis** | **Adjustment for time from stroke analysis** |
|  | **LAAO** **N=286** | **DOAC** **N=301** | **LAAO****N=297** | **DOAC****N=298** | **LAAO****N=281** | **DOAC****N=297** | **LAAO****N=254** | **DOAC****N=291** |
| Age, median (IQR) | 76.0 (71-81) | 74.8 (69-81) | 76.0 (71-81) | 74.7 (69-82) | 76 (71-81) | 74.7 (69-82) | 76.0 (71-81) | 74.7 (69-81) |
| Female gender | 202 (67.6%) | 203 (66.7%) | 200 (67.3%) | 191 (64.3%) | 185 (65.8%) | 203 (68.6%) | 171 (67.3%) | 191 (65.9%) |
| Hypertension | 246 (82.3%) | 253 (83.1%) | 244 (82.2%) | 259 (87.0%) | 228 (81.1%) | 250 (84.1%) | 208 (81.9%) | 245 (84.4%) |
| Congestive heart failure | 40 (13.4%) | 45 (14.9%) | 40 (13.5%) | 45 (15.2%) | 38 (13.5%) | 39 (13.1%) | 35 (13.8%) | 33 (11.5%) |
| Diabetes mellitus | 87 (29.1%) | 102 (33.4%) | 85 (28.6%) | 96 (32.2%) | 73 (25.9%) | 89 (29.9%) | 68 (26.7%) | 98 (33.7%) |
| Vascular disease  | 109 (36.5%) | 114 (37.6%) | 107 (36.0%) | 105 (35.2%) | 91 (32.4%) | 104 (35.0%) | 86 (33.8%) | 92 (31.8%) |
| Abnormal renal function | 29 (9.6%) | 35 (11.5%) | 29 (9.8%) | 34 (11.6%) | 27 (9.6%) | 31.7 (10.7%) | 25 (9.8%) | 35 (12.1%) |
| Abnormal liver function | 8 (2.7%) | 10 (3.3%) | 8 (2.7%) | 5 (1.5%) | 7 (2.5%) | 7 (2.4%) | 5 (1.9%) | 4 (1.6) |
| Prior bleeding | 235 (78.6%) | 240 (78.8%) | 233 (78.5%) | 230 (77.3%) | 217 (77.2%) | 235 (79.1%) | 200 (78.7%) | 226 (77.8%) |
| Antiplatelet/NSAID use | 85 (28.4%) | 97 (31.9%) | 85 (28.6%) | 93 (31.1%) | 85 (30.2%) | 97 (32.8%) | 78 (30.7%) | 92 (31.8%) |
| Alcohol  | 15 (5.0%) | 12 (3.8%) | 15 (5.1%) | 19 (6.4%) | 14 (4.9%) | 18 (6.0%) | 12 (4.7%) | 12 (4.3%) |
| Prior myocardial infarction | 47 (15.7%) | 95 (31.2%) | 47 (15.8%) | 87 (29.4%) | 40 (14.2%) | 88 (29.8%) | 38 (14.9%) | 76 (26.3%) |
| Known CAD | 85 (28.4%) | 105 (34.6%) | 84 (28.3%) | 92 (30.9%) | 74 (26.3%) | 98 (32.9%) | 67 (26.4%) | 82 (28.5%) |
| Prior CABG/PCI | 72 (24.1%) | 45 (14.7%) | 71 (23.9%) | 39 (13.1%) | 63 (22.4%) | 35 (11.9%) | 61 (24.0%) | 27 (9.4%) |
| Peripheral vascular disease | 51 (17.1%) | 43 (14.4%) | 50 (16.8%) | 46 (15.6%) | 43 (15.3%) | 44 (14.8%) | 42 (16.5%) | 51 (17.5%) |
| Prior carotid artery intervention | 10 (3.3%) | 9 (2.8%) | 10 (3.4%) | 6 (2.0%) | 9 (3.2%) | 8 (2.8%) | 7 (2.7%) | 11 (3.9%) |
| COPD | 22 (7.4%) | 48 (15.7%) | 22 (7.4%) | 61 (20.7%) | 21 (7.4%) | 65 (21.8%) | 18 (7.1%) | 67 (23.2%) |
| Ischemic stroke on OAC | 121 (40.5%) | 121 (39.8%) | 119 (40.1%) | 131 (44.3%) | 114 (40.6%) | 61 (20.5%) | 107 (42.1%) | 55 (18.9%) |
| CHA2DS2-VASc score, mean (SD) | 5.3$\pm $1.4 | 5.4$\pm $1.3 | 5.3$\pm $1.4 | 5.4$\pm $1.2 | 5.2$\pm $1.4 | 5.3$\pm 1.3$ | 5.2$\pm 1.4$ | 5.3$\pm 1.4$ |
| HAS-BLED score, mean (SD) | $$4.0\pm 0.9$$ | 4.0$\pm $1.0 | 4.0$\pm $0.9 | 4.0$\pm 0.9$ | 4.0$\pm 0.9$ | 4.0$\pm 1.0$ | 4.0$\pm 0.9$ | 4.0$\pm 1.0$ |

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| --- | --- | --- | --- |
| **Suppl. Table 4: All analyses restricted to DOAC adherence > 60 days** | **Adjustment; stroke on treatment** | **Exclusion of cancer patients analysis** | **Adjustment for time from stroke analysis** |
|  | **LAAO****N=297** | **DOAC****N=298** | **LAAO****N=281** | **DOAC****N=297** | **LAAO****N=254** | **DOAC****N=291** |
| Age, median (IQR) | 76.0 (71-81) | 75.4 (69-82) | 76 (71-81) | 75.2 (69-80) | 76.0 (71-81) | 74.5 (68-82) |
| Female gender | 202 (67.6%) | 198 (66.2%) | 201 (67.5%) | 203 (70.4%) | 176 (67.9%) | 199 (73.7%) |
| Hypertension | 246 (82.3%) | 258 (86.4%) | 246 (82.3%) | 245 (85.3%) | 213 (82.2%) | 228 (84.4%) |
| Congestive heart failure | 40 (13.4%) | 52 (17.4%) | 40 (13.4%) | 57 (19.9%) | 35 (13.5%) | 38 (14.1%) |
| Diabetes mellitus | 87 (29.0%) | 87 (29.3%) | 87 (29.1%) | 94 (32.6%) | 70 (27.0%) | 89 (33.2%) |
| Vascular disease  | 109 (36.4%) | 109 (36.6%) | 109 (36.5%) | 109 (38.0%) | 91 (25.1%) | 91 (33.8%) |
| Abnormal renal function | 29 (9.7%) | 36 (12.2%) | 29 (9.7%) | 38 (13.4%) | 25 (9.6%) | 32 (11.9%) |
| Abnormal liver function | 8 (2.7%) | 9 (3.0%) | 8 (2.7%) | 13 (4.7%) | 5 (1.9%) | 6 (2.3%) |
| Prior bleeding | 235 (78.6%) | 235 (78.6%) | 235 (78.6%) | 229 (79.6%) | 205 (79.1%) | 215 (79.9%) |
| Antiplatelet/NSAID use | 85 (28.4%) | 95 (31.8%) | 85 (28.4%) | 97 (33.9%) | 78 (30.1%) | 95 (35.3%) |
| Alcohol  | 15 (5.0%) | 13 (4.5%) | 15 (5.0%) | 14 (4.8%) | 12 (4.6%) | 12 (4.4%) |
| Prior myocardial infarction | 47 (15.7%) | 82 (27.4%) | 47 (15.7%) | 98 (34.1%) | 40 (15.4%) | 77 (28.5%) |
| Known CAD | 85 (28.4%) | 91 (30.6%) | 85 (28.4%) | 109 (37.9%) | 69 (26.6%) | 89 (33.0%) |
| Prior CABG/PCI | 72 (24.1%) | 37 (12.5%) | 72 (24.1%) | 50 (17.6%) | 64 (24.7%) | 41 (15.3%) |
| Peripheral vascular disease | 51 (17.1%) | 54 (18.2%) | 51 (17.1%) | 45 (15.6%) | 43 (16.6%) | 46 (17.2%) |
| Prior carotid artery intervention | 10 (3.3%) | 11 (3.8%) | 10 (3.3%) | 3 (1.2%) | 7 (2.7%) | 9 (3.3%) |
| COPD | 22 (7.3%) | 57 (19.2%) | 22 (7.4%) | 45 (15.7%) | 18 (6.9%) | 48 (17.9%) |
| Ischemic stroke on OAC | 121 (40.5%) | 141 (47.2%) | 121 (40.5%) | 112 (39.1%) | 109 (42.1%) | 90 (33.4%) |
| CHA2DS2-VASc score, mean (SD) | 5.3$\pm $1.4 | 5.4$\pm $1.2 | 5.2$\pm $1.4 | 5.3$\pm 1.3$ | 5.2$\pm 1.4$ | 5.3$\pm 1.4$ |
| HAS-BLED score, mean (SD) | 4.0$\pm $0.9 | 4.0$\pm 0.9$ | 4.0$\pm 0.9$ | 4.0$\pm 1.0$ | 4.0$\pm 0.9$ | 4.0$\pm 1.0$ |

**Supplemental table 5: Cause of death**

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| --- | --- | --- |
| Aggregated causes of death | DOAC | LAAO |
| Cancer | 19 | 9 |
| Cardiovascular | 13 | 10 |
| Bleeding | 4 | 4 |
| Neurocardiovascular | 11 | 3 |
| Infectious disease | 12 | 2 |
| GI/Hepatic disease | 6 | 2 |
| Renal disease | 2 | 2 |
| Endocrinology disease | 2 | 0 |
| Other | 5 | 4 |
|  | 74 | 36 |

**Supplemental figure 1: Distribution of propensity scores before and after matching for primary study cohort**

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DOAC: Direct oral anticoagulation, LAAO: left atrial appendage occlusion