

**Supplementary file 1-3.** Multivariable hazards ratio for CVD mortality associated with atrial fibrillation, according to ejection fraction groups.

Variable	HF <sub>r</sub> EF		HF <sub>mr</sub> EF		HF <sub>p</sub> EF	
	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
<b>Atrial fibrillation</b>	0.908 (0.716–1.150)	0.423	1.060 (0.660–1.702)	0.808	1.554 (1.063–2.272)	0.023
<b>Sex, male</b>	1.096 (0.854–1.407)	0.471	1.106 (0.644–1.900)	0.715	1.465 (0.932–2.304)	0.098
<b>Age, ≥80 yrs</b>	1.523 (1.206–1.924)	0.000	2.047 (1.304–3.214)	0.002	1.986 (1.370–2.879)	0.000
<b>NYHA functional class</b>						
III vs II	1.641 (1.131–2.379)	0.009	0.932 (0.401–2.162)	0.869	1.482 (0.800–2.744)	0.211
IV vs II	1.841 (1.279–2.652)	0.001	1.799 (0.813–3.984)	0.147	2.167 (1.195–3.931)	0.011
<b>Hypertension</b>	1.432 (1.152–1.780)	0.001	1.099 (0.656–1.840)	0.720	1.390 (0.905–2.133)	0.133
<b>Diabetes mellitus</b>	0.997 (0.800–1.242)	0.976	0.867 (0.529–1.420)	0.570	0.978 (0.648–1.477)	0.916
<b>Ischemic heart disease</b>	1.767 (1.386–2.253)	0.000	1.528 (0.877–2.661)	0.134	1.251 (0.813–1.926)	0.309
<b>Renal failure</b>	1.926 (1.488–2.493)	0.000	2.597 (1.469–4.592)	0.001	2.981 (1.892–4.694)	0.000
<b>Cancer</b>	0.937 (0.665–1.321)	0.711	1.292 (0.623–2.679)	0.491	1.320 (0.724–2.407)	0.365
<b>Prior stroke</b>	1.119 (0.871–1.437)	0.378	0.771 (0.428–1.388)	0.386	1.846 (1.233–2.764)	0.003
<b>Heart rate</b>	0.997 (0.993–1.001)	0.159	1.000 (0.991–1.009)	0.983	1.003 (0.996–1.010)	0.436
<b>Systolic blood pressure</b>	0.994 (0.988–0.999)	0.021	0.993 (0.983–1.003)	0.184	1.000 (0.993–1.008)	0.924
<b>diastolic blood pressure</b>	0.990 (0.982–0.999)	0.024	0.994 (0.978–1.011)	0.505	0.999 (0.986–1.012)	0.915
<b>Body mass index</b>	0.952 (0.924–0.981)	0.001	1.008 (0.946–1.074)	0.804	0.934 (0.890–0.98)	0.006
<b>White blood cells</b>	1.021 (0.998–1.044)	0.077	0.997 (0.943–1.054)	0.910	1.046 (1.000–1.095)	0.050
<b>HbA1c</b>	0.957 (0.928–0.987)	0.005	1.026 (0.959–1.099)	0.452	0.972 (0.916–1.032)	0.358
<b>Potassium</b>	0.926 (0.812–1.056)	0.253	0.773 (0.575–1.039)	0.087	1.236 (0.963–1.587)	0.097
<b>Sodium ≥135 mmol/L</b>	0.599 (0.488–0.735)	0.000	0.700 (0.436–1.125)	0.141	0.878 (0.594–1.299)	0.515
<b>Hemoglobin ≥12 g/dL</b>	0.861 (0.696–1.065)	0.167	0.769 (0.461–1.284)	0.316	0.781 (0.540–1.130)	0.190
<b>Blood urea nitrogen ≥26 mg/dL</b>	1.153 (0.913–1.456)	0.233	1.612 (0.984–2.641)	0.058	1.422 (0.939–2.152)	0.096
<b>Creatinine ≥2 mg/dL</b>	0.789 (0.589–1.056)	0.111	0.819 (0.425–1.579)	0.551	0.358 (0.197–0.651)	0.001
<b>BNP &gt;900 pg/mL or NTproBNP &gt;5000 pg/mL</b>	1.546 (1.231–1.942)	0.000	1.248 (0.782–1.993)	0.353	1.397 (0.964–2.024)	0.078
<b>ACEI or ARB</b>	0.557 (0.450–0.690)	0.000	1.084 (0.671–1.752)	0.741	0.905 (0.630–1.300)	0.589
<b>Beta-blockers</b>	0.741 (0.607–0.905)	0.003	0.628 (0.398–0.989)	0.045	0.683 (0.479–0.975)	0.036
<b>Aldosterone antagonist</b>	0.769 (0.626–0.944)	0.012	1.711 (1.098–2.668)	0.018	0.893 (0.629–1.268)	0.529
<b>Nitrate</b>	0.826 (0.675–1.011)	0.064	1.358 (0.839–2.200)	0.213	0.774 (0.543–1.102)	0.156
<b>Diuretic</b>	1.215 (0.751–1.966)	0.427	0.785 (0.338–1.820)	0.572	0.597 (0.311–1.144)	0.120

<b>Anticoagulant</b>	1.102 (0.897–1.353)	0.354	1.190 (0.748–1.892)	0.462	1.014 (0.704–1.461)	0.941
<b>Antiplatelet</b>	0.889 (0.697–1.134)	0.343	1.081 (0.625–1.869)	0.781	0.788 (0.537–1.157)	0.224
<b>Statin</b>	0.815 (0.660–1.006)	0.057	0.536 (0.329–0.875)	0.013	0.867 (0.584–1.288)	0.480
<b>Smoking status</b>						
Ex vs current	1.102 (0.824–1.476)	0.512	1.083 (0.443–2.650)	0.861	0.998 (0.497–2.006)	0.997
Never vs current	0.887 (0.651–1.209)	0.449	0.908 (0.386–2.134)	0.824	1.097 (0.557–2.159)	0.789
<b>Alcohol consumption</b>						
Social vs heavy	1.563 (0.951–2.571)	0.078	5.944 (0.772–45.791)	0.087	1.155 (0.492–2.712)	0.741
Never vs heavy	1.715 (1.025–2.871)	0.040	7.394 (0.965–56.683)	0.054	1.526 (0.645–3.607)	0.336

ACEI, Angiotensin-converting enzyme inhibitor; ARB, Angiotensin receptor blockers; BNP, brain natriuretic peptide; NT-proBNP, N-terminal prohormone of brain natriuretic peptide; EF, ejection fraction; HFrEF, heart failure with reduced ejection fraction; HFmrEF, heart failure with mid-range ejection fraction; HFpEF, heart failure with preserved ejection fraction; HR, hazard ratio; NYHA, New York Heart Association.