SUPPLEMENTAL MATERIAL

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Table S1. Association of antidiabetic medication with specific AF symptoms (n, 2411)†

	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Palpitations		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	0.78 (0.59; 1.02)	0.76 (0.57; 1.00)
Insulin-requiring diabetes	**0.41 (0.26; 0.66)**	**0.40 (0.25; 0.64)**
Dizzeness		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin requiring diabetes	1.15 (0.81; 1.63)	1.15 (0.80; 1.63)
Insulin-requiring diabetes	1.08 (0.64; 1.81)	1.08 (0.64; 1.81)
Chest pain		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	1.27 (0.84; 1.90)	1.22 (0.81; 1.84)
Insulin-requiring diabetes	1.50 (0.86; 2.61)	1.46 (0.84; 2.54)
Exercise intolerance		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	0.85 (0.62; 1.16)	0.86 (0.62; 1.17)
Insulin-requiring diabetes	**0.57 (0.34; 0.96)**	**0.57 (0.34; 0.96)**
Dyspnea		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	1.16 (0.87; 1.55)	1.13 (0.85; 1.51)
Insulin-requiring diabetes	0.88 (0.56; 1.36)	0.84 (0.54; 1.31)
Tiredness		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	0.96 (0.68; 1.37)	0.98 (0.69; 1.40)
Insulin-requiring diabetes	1.12 (0.69; 1.83)	1.12 (0.68; 1.83)
Syncope		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	1.25 (0.65; 2.42)	1.22 (0.63; 2.36)
Insulin-requiring diabetes	0.50 (0.12; 2.09)	0.49 (0.12; 2.05)
Other symptoms		
No diabetes	1 (Reference)	1 (Reference)
Non-insulin-requiring diabetes	0.70 (0.46; 1.05)	0.69 (0.46; 1.04)
Insulin-requiring diabetes	0.72 (0.39; 1.30)	0.71 (0.39; 1.28)

Model 1: adjusted for age and sex.
Model 2: adjusted for age, sex, use of beta-blockers, and use of antiarrhythmic medications.
† For this analysis, participants were classified into patients without diabetes (reference), patients with non-insulin-requiring diabetes, and patients with insulin-requiring diabetes. Abbreviations: AF, atrial fibrillation; OR, odds ratio; CI, confidence interval.

Table S2. Association of diabetes with the domains of quality of life score† (n, 2411)

	Model 1 OR (95% CI)	Model 2 OR (95% CI)
Impaired mobility	**2.28 (1.82; 2.87)**	**1.59 (1.25; 2.02)**
Impaired self-care	**3.90 (2.57; 5.93)**	**3.20 (2.06; 4.95)**
Impaired usual activities	**2.49 (1.91; 3.25)**	**2.05 (1.55; 2.70)**
Pain/discomfort	**1.44 (1.16; 1.79)**	1.14 (0.91; 1.43)
Anxiety/depression	1.02 (0.78; 1.34)	0.95 (0.72; 1.26)

Model 1: adjusted for age and sex
Model 2: adjusted for age, sex, smoking status, body mass index, and prevalent hypertension.
† The quality of life score was based on European Quality of life-5 Dimensions questionnaire (EQ-5D). EQ-5D was composed of five domains, including mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.
Abbreviations: OR, odds ratio; CI, confidence interval.

Table S3. Baseline characteristics of participants with and without data available on left atrial size and ejection fraction†

	All (n, 2411)	LA measure available (n, 476)	Without LA measure available (n, 1935)	EF measure available (n, 711)	Without EF measure available (n, 1700)
Age, years	73.2 (8.4)	73.2 (8.4)	73.2 (8.4)	72.5 (8.6)	73.5 (8.3)
Women, n (%)	661 (27.4)	132 (27.7)	529 (27.4)	193 (27.1)	468 (27.6)
Smoking, n (%)					
Current	175 (7.3)	31 (6.5)	144 (7.4)	47 (6.6)	128 (7.5)
Former	1180 (48.9)	233 (48.9)	947 (48.9)	355 (49.9)	825 (48.5)
Never	1056 (43.8)	212 (44.5)	844 (43.7)	309 (43.5)	747 (43.9)
Body mass index, kg/m^2	27.7 (4.7)	27.6 (4.5)	27.6 (4.8)	27.6 (4.7)	27.6 (4.8)
Systolic blood pressure, mm Hg	133.8 (18.7)	134.9 (19.1)	133.5 (18.6)	133.9 (18.9)	133.8 (18.6)
Diastolic blood pressure, mm Hg	77.3 (11.8)	78.1 (11.8)	77.2 (11.8)	78.1 (11.9)	77 (11.8)
Diabetes mellitus, n (%)	420 (17.4)	74 (15.5)	346 (17.9)	115 (16.2)	305 (18)
History of hypertension, n (%)	1684 (69.8)	314 (66)	1370 (70.8)	472 (66.4)	1212 (71.3)
History of myocardial infarction, n (%)	390 (16.2)	78 (16.4)	312 (16.1)	114 (16)	276 (16.2)
History of heart failure, n (%)	625 (25.9)	113 (23.7)	512 (26.5)	175 (24.6)	450 (26.5)
History of stroke, n (%)	318 (13.2)	62 (13)	256 (13.2)	90 (12.7)	228 (13.4)
Quality of life	72.1 (17.4)	72.04 (18.4)	72.23 (17.2)	72.79 (17.6)	71.95 (17.4)

† Data are presented as mean (standard deviation), unless otherwise specified.
The quality of life score ranges from 0 to 100, with higher values indicating better quality of life.
Abbreviations: LA, left atrium; EF, ejection fraction.

Table S4. Association of diabetes and antidiabetic medication with echocardiographic parameters in AF patients†

	Model 1 β (95% CI)	Model 2 β (95% CI)
Association of diabetes with echocardiographic parameters		
Left atrial size (mm)	1.47 (-0.46; 3.40)	0.27 (-1.70; 2.23)
Left ventricular ejection fraction (%)	-1.63 (-3.90; 0.64)	-0.09 (-1.97; 1.79)
Association of antidiabetic medication with echocardiographic parameters‡		
Left atrial size (mm)		
No diabetes	0 (Reference)	0 (Reference)
Non-insulin-requiring diabetes	1.24 (-0.97; 3.46)	0.05 (-2.19; 2.29)
Insulin-requiring diabetes	2.07 (-1.42; 5.55)	0.85 (-2.61; 4.30)
Left ventricular ejection fraction (%)		
No diabetes	0 (Reference)	0 (Reference)
Non-insulin-requiring diabetes	-1.47 (-4.07; 1.14)	-1.56 (-4.26; 1.13)
Insulin-requiring diabetes	-2.07 (-6.16; 2.02)	-2.31 (-6.51; 1.88)

Model 1: adjusted for age and sex.
Model 2: adjusted for age, sex, smoking status, body mass index, and prevalent hypertension.
† Data on left atrial size and ejection fraction were available in a subsample of 476 and 711 participants, respectively. The beta regression coefficients indicate the predicted differences in mean echocardiographic parameters between categories of diabetes status.
‡ For this analysis, participants were classified into patients without diabetes (reference), patients with non-insulin-requiring diabetes, and patients with insulin-requiring diabetes.
Abbreviations: AF, atrial fibrillation; β, beta regression coefficient; CI, confidence interval.

Table S5. Association of diabetes with AF phenotype, cardiac and neurological comorbidities, additionally adjusting for RCI and use of anticoagulation medication*

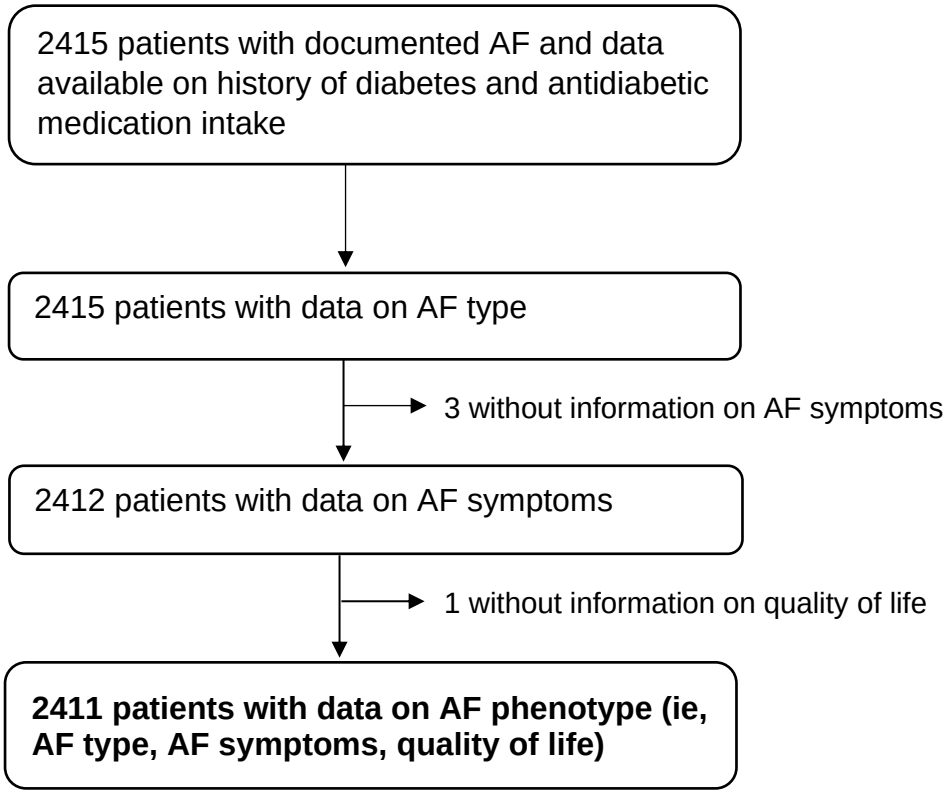
	Additionally adjusting for RCI	Additionally adjusting for use of anticoagulation medication
Association of diabetes with AF phenotype		
Non-paroxysmal AF, OR (95% CI)	1.04 (0.82; 1.30)	1.01 (0.80; 1.26)
Any AF symptoms, OR (95% CI)	**0.75 (0.60; 0.92)**	**0.73 (0.59; 0.91)**
Quality of life, β (95% CI)	**-4.50 (-6.37;-2.64)**	**-4.53 (-6.39;-2.67)**
Association of diabetes with cardiac comorbidities		
Hypertension, OR (95% CI)	**2.98 (2.15; 4.14)**	**3.03 (2.18; 4.21)**
Myocardial infarction, OR (95% CI)	**1.53 (1.17; 2.01)**	**1.55 (1.18; 2.03)**
Heart failure, OR (95% CI)	**2.02 (1.59; 2.55)**	**1.99 (1.58; 2.52)**
Association of diabetes with neurological comorbidities		
Stroke, OR (95% CI)	**1.34 (1.00; 1.82)**	**1.38 (1.02; 1.86)**
Cognitive impairment, OR (95% CI)	**1.74 (1.38; 2.19)**	**1.76 (1.40; 2.21)**

*Model 2 in the main analyses (reported in Table 2 and Table 3) was additionally adjusted for RCI and use of anticoagulation medication, respectively. Data on AF phenotype, history of hypertension and history of myocardial infarction were available in 2411 participants. Data on history of heart failure and data on history of stroke were available in 2409 and 2410 participants, respectively. Data on cognitive impairment were available in a 2398 participants. The quality of life score ranges from 0 to 100, with higher values indicating a better quality of life.

RCI was defined as either a history of pulmonary vein isolation and/or electrical cardioversion and/or use of antiarrhythmic medications, which altogether represent the most effective RCI currently available.

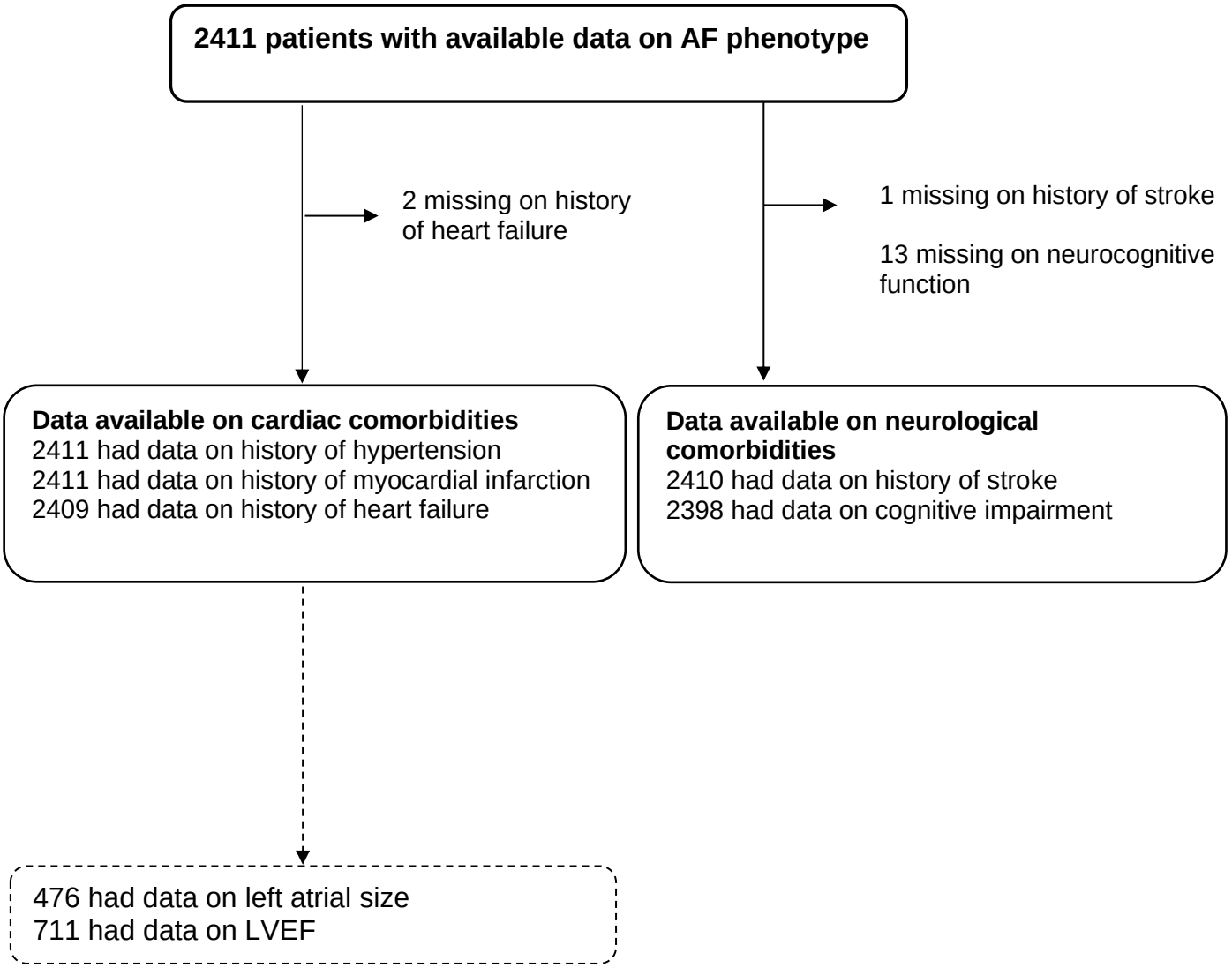
Abbreviations: AF, atrial fibrillation; RCI, rhythm control intervention; OR, odds ratio; CI, confidence interval; β, beta regression coefficient.

Figure S1. Flow chart for selection of study participants with data available on AF phenotype (primary analyses).



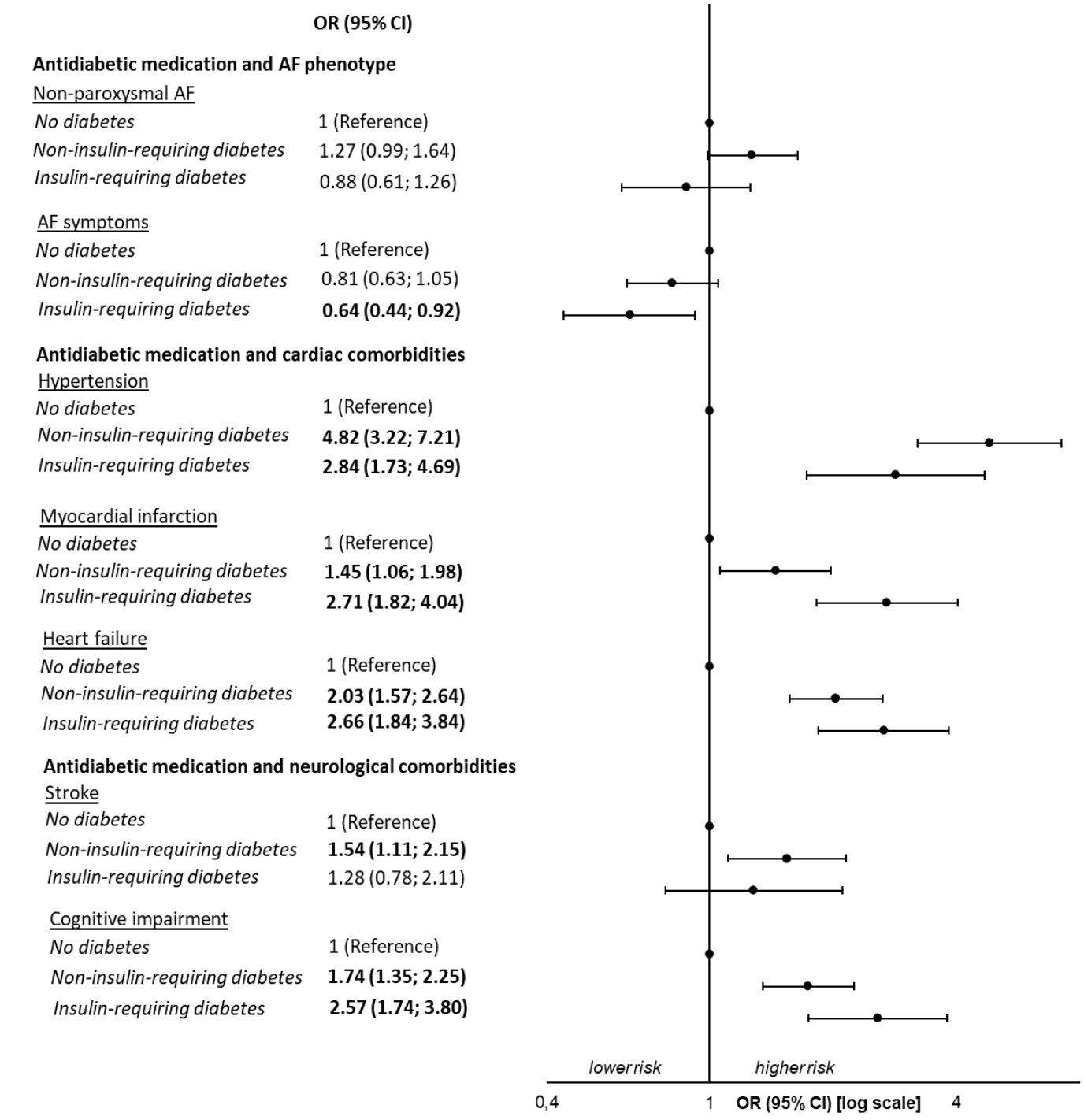
Abbreviation: AF, atrial fibrillation

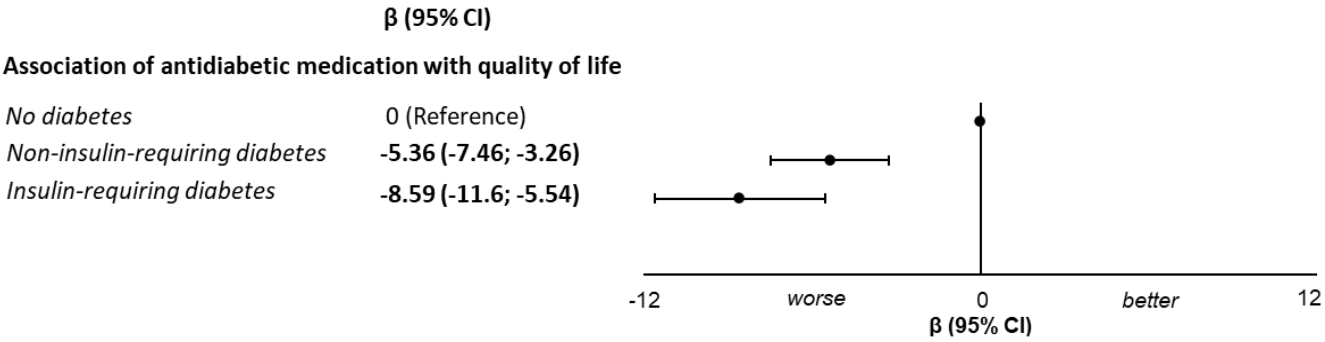
Figure S2. Flow chart for selection of study participants with data available on cardiac and neurological comorbidities (secondary analyses).



Abbreviation: AF, atrial fibrillation; LVEF, left ventricular ejection fraction.

Figure S3. Association of antidiabetic medication with AF phenotype, cardiac and neurological comorbidities.





For this analysis, participants were classified into: patients without diabetes, patients with non-insulin-requiring diabetes, and patients with insulin-requiring diabetes. **a.** Age- and sex- adjusted OR and 95% CI are derived based on logistic regression. The vertical line represents an odds ratio of 1. **b.** Age- and sex- adjusted β and 95% confidence intervals are derived based on linear regression. The vertical line represents a β of 0. The quality of life score ranges from 0 to 100, with higher values indicating better quality of life. Abbreviations: OR, odds ratio; CI, confidence interval; AF, atrial fibrillation; β, beta regression coefficient.