## SUPPLEMENTAL MATERIAL

## Is the association of QTc with atrial fibrillation and stroke in cohort studies

## a matter of time?

Navid Radnahad <sup>1</sup>, Hanne Ehrlinder <sup>1</sup>, Karin Leander <sup>2</sup>, Johan Engdahl <sup>1</sup>, Håkan Wallén <sup>1</sup>, Bruna Gigante <sup>1,3</sup>

- 1 Dept of Clinical Science Danderyd University Hospital, Stockholm, Sweden
- 2 Unit of Cardiovascular and Nutritional Epidemiology, Institute of Environmental Medicine, Karolinska Institutet, Stockholm
- 3 Division of Cardiovascular Medicine, Dept of Medicine, Karolinska Institutet, Stockholm Sweden

## Index

Supplemental Figure I

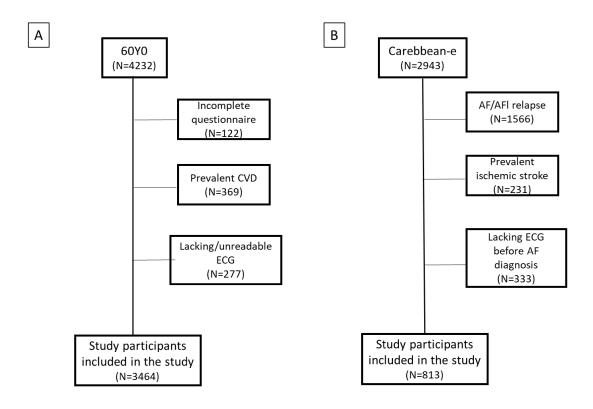
Supplemental Table I

**Supplemental Table II** 

**Supplemental Table III** 

**Supplemental Table IV** 

Supplemental Figure I. Flowchart of the inclusion and exclusion of participants from the 60YO (Panel A) and Carebbean-e (Panel B)



Abbreviations: CVD: cardiovascular disease including myocardial infarction, ischemic stroke and atrial fibrillation/flutter; AF: atrial fibrillation; AFL: atrial flutter; ECG: electrocardiogram

**Supplemental Table I**. Risk of ischemic stroke, atrial fibrillation and atrial fibrillation and ischemic stroke associated with increasing QTc interval length (ms) in the 60YO.

Atrial Fibrillation	Non Cases/Cases	HR (95%CI)	P value
Crude	3029/435	1.01 (1.00-1.01)	<0.0001
Model 1	2946/425	1.01 (1.00-1.01)	< 0.0001
Model 2	2907/421	1.01 (1.00-1.01)	<0.0001
Ischemic stroke			
Crude	3317/147	1.00 (0.99-1.01)	0.34
Model 1	3228/143	1.00 (0.99-1.01)	0.33
Model 2	3185/143	1.00 (0.99-1.01)	0.37
Atrial fibrillation			
and ischemic stroke			
Crude	3409/55	1.00 (0.99-1.02)	0.06
Model 1	3318/53	1.00 (0.99-1.02)	0.06
Model 2	3276/52	1.01 (1.00-1.02)	0.04
			-

Model 1: adjusted for sex, hypertension, left ventricular hypertrophy and QRS length.

Model 2: model 1+ diabetes, smoking, BMI, alcohol consumption and hyperlipidemia.

Supplemental Table II. Clinical characteristics of the Carebbean-e study participants included in the present study

	Carebbean-e (n=813)
Age (y)	83 (79-88)
Male/Female	297/516
BMI (kg/m²)	25 (22-28)
Risk factors, n (%)	
Hypertension	571 (70)
Diabetes	119 (15)
Oral anticoagulant treatment, n (%)	599 (73)
ECG parameters	
Heart rate, bpm	71 (62-81)
PQ, ms	166 (148-188)
QRS, ms	90 (82-100)
QTc, ms	433 (414-453)
Time from ECG in SR to AF	2.16 (5- 0.69)
diagnosis (y)	

Continuous data are reported as median and interquartile range. Missing values: BMI, n=7

**Supplemental Table III.** Association of the QTc duration as a continuous variable and categorized into quartiles with the risk of ischemic stroke in the Carebbean-e study

	Non cases/ Cases	Crude HR (95%CI)	Model 1 HR (95%CI)	Model 2 HR (95%CI)
QTc (ms)	727/86	1.00 (0.99-1.01)	1.00 (0.99-1.01)	1.00 (0.99-1.01)
Q1	181/22	Ref	Ref	Ref
Q2	181/20	1.04 (0.57-1.91)	1.00 (0.54-1.84)	1.00 (0.54-1.86)
Q3	183/20	1.14 (0.62-2.11)	0.98 (0.52-1.84)	1.01 (0.53-1.93)
Q4	182/24	1.43 (0.82-2.57)	1.34 (0.74-2.40)	1.35 (0.69-2.62)

QTc quartiles boundaries (ms): Q1<414; Q2≥414, <433; Q3≥433, <453; Q4≥453

**Supplemental Table IV.** QTc duration according to time from ECG registration showing sinus rhythm (ECG-SR) to the time when a diagnostic ECG for AF (ECG-AF) was recorded categorized in quartiles (Q) in study participants from the Carebbean-e study

Time interval between the ECG in sinus rhythm and		Carebbean-e (n=813)		Incident ischemic stroke (n=86)		Non cases (n=727)	
							the AF diag
Quartile	Quartile borders (y)	N	QTc (ms)	N	QTc (ms)	N	QTc (ms)
Q4	> 5.07	203	421 (402-436)	17	425 (404-442)	186	420 (402-435)
Q3	≤5.07->2.16	203	433 (415-452)	26	432 (424-44)	177	434 (415-452)
Q2	<2.16->0.69	205	440 (420-462)	21	439 (420-460)	184	440 (420-464)
Q1	<0.69	202	440 (418-459)	22	441 (412-466)	180	440 (418-457)