**Supplementary material**

## *Table of Contents*

INTRODUCTION ........ 1

Table S1 Summary of cohort studies examining associations of resting heart rate with the onset of CVDs in healthy populations ........ 1

METHODS ........ 4

Figure S1. Study Flow diagram ........ 4

Figure S2. Heart rate distribution in people with heart rate measured a)on the same day as blood pressure recording, b)different date from blood pressure recording…………………………5

S3. Multiple imputation ........ 6

RESULTS ........ 7

*Baseline characteristics* ........ 7

Table S3. Baseline characteristics of patients with and without resting heart rate recording in primary care ........ 7

Table S4. Age adjusted hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite endpoints ........ 8

*Sensitivity analysis* ........ 10

Figure S3. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of heart failure, unheralded coronary death, sudden cardiac death or ventricular arrhythmia and myocardial infarction in men without a beta-blocker prescription (N= 65,866) at baseline, vs men with a beta-blocker prescription (N= 32,325) ........ 10

Figure S4. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of heart failure, unheralded coronary death, sudden cardiac death or ventricular arrhythmia and myocardial infarction in women without a beta-blocker prescription (N= 87,399) at baseline, vs women with a beta-blocker prescription (N= 48,200) ........ 11

Figure S5. Hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men after exclusion of cardiovascular events during the first year after heart rate measurement (N=77,843) ........ 12

Figure S6. Hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in women after exclusion of cardiovascular events during the first year after heart rate measurement (N=110,113) ........ 13

Figure S7. Hazard ratios for the association between average repeated heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men and women (N=233,970) ........ 14
Figure S8. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men and women (N=233,970) using as heart rate reference level 70-79bpm ........ 15
Figure S9. Hazard ratios (95% CIs) for the association between heart rate quintiles in 12 cardiovascular diseases and mortality ........ 16
Table S5. Hazard ratios (95%CI) for a 10bpm increase in the clinical RHR for those with a heart rate of 65bpm or more ........ 17
REFERENCES ........ 18

Footnote: *hypertension was defined as systolic BP ≥140 or diastolic BP ≥ 90 mmHg

Footnote: *Models included sex, age, quadratic age, interaction between heart rate and sex, social deprivation, smoking, systolic blood pressure, beta-blockers prescription, total cholesterol, HDL, LDL, diabetes II and BMI measured at baseline (stratification by primary care practice). Blood pressure medication variable consisted of BNF codes that refer to diuretics, b-blockers, calcium channel blockers and ACE inhibitors prescription.

## INTRODUCTION

Table S1 Summary of cohort studies examining associations of resting heart rate with the onset of CVDs in healthy populations

| Design and methods | | | | | | | | Endpoints | | Results | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Author** | **Country** | Data sources: Population | Data sources: EHR | Year of study initiation | Sample size | Age | Gender | Mortality only outcomes | N of non-fatal specific diseases | Description of shape of association | Estimates reported for 70-79bpm | Test for sex interaction | Reported comparison and main findings |
| **Kannel et al.(1987)[1]** | USA | ● | ○ | 1948 | 5,209 | 35-95 | Both | ● | 0 | ○ | ○ | ɵ | Per 1bpm increase<br>Finding: No evidence of threshold or association was found. |
| **Gillum et al. (1991)[2]** | USA | ● | ○ | 1971 | 5,995 | 45-74 | Both | ● | 0 | ○ | ○ | ● | Reference level: <74bpm.<br>Finding: High risk of all-cause, CHD and CVD death for HR>84bpm |
| **Shaper et al (1993)[3]** | UK | ● | ○ | 1969 | 7,735 | 40-59 | Males | ● | 0 | ○ | ● | ○ | Reference level: <90<br>Findings: high statistically significant risk of IHD morbidity and mortality and SCD for ≥90bpm but not for 70-to -89 |
| **Mensink et al. (1997)[4]** | Germany | ● | ○ | 1982 | 4,756 | 40-80 | Both | ● | 0 | ○ | ○ | ɵ | Per 20bpm increase<br>Findings: Men: all-cause and CVD mortality HazR=1.7 and 1.7<br>Women: HazR=1.4 and HazR=1.3 respectively |
| **Benetos et al.[5] (1999)** | France | ● | ○ | 1970 | 19,386 | 40-69 | Both | ● | 0 | ○ | ○ | ● | Reference level: 60-80bpm<br>In men increased risk for CV, all-cause and non-CV death and CAD events for HR>100bpm. No stroke risk<br>*Women: insignificant increased risk for CVD & stroke.* |
| **Greenland et al. (1999)** | USA | ● | ○ | 1967 | 33,781 | 18-74 | Both | ● | 0 | ○ | ○ | ○ | Per 12 bpm increase associated with increased risk of CHD, CVD mortality in men but *not consistently in all ages for women* |
| **Palatini et al. (1999)[6]** | Italy | ● | ○ | 1983 | 1,938 | >65 | Both | ● | 0 | ○ | ○ | ○ | **Reference level 1st quintile (non-specific values)**<br>**Elder** Men/women (for all-cause mortality, 5th quintile: RR=1.21/1.13), Cardiovascular mortality: RR=1.55/1.08 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Kristal-Boneh et al. (2000)[7]** | Israel | ● | ○ | 1985 | 3,527 | 43 | Males | ● | 0 | ○ | ○ | ○ | Reference level: 70-79bpm<br>For >90bpm: All-cause mortality RR=2.23<br>CVD mortality: RR=2·02.<br>*For 80-89bpm no effect was found* |
| **Seccareccia et al. (2001)[8]** | Italy | ● | ○ | 1984 | 2,533 | 40-69 | Males | ● | 0 | ○ | ● | ○ | Reference level: <60bpm<br>For≥90 bpm: All-cause HazR = 2.67<br>CVD mortality: HazR=2.54<br>Non-CVD mortality :HazR=2.87 |
| **Jouven et al. (2001)[9]** | France | ● | ○ | 1967 | 7,746 | 42-53 | Males | MI fatal, SCD | 2 | ○ | ○ | ○ | For 1 SD increase of HR: Sudden death: HazR=1.28 (1.06-1.61)<br>Fatal MI: HazR=1.05 (0.95-1.16) (multivariable) |
| **Fujiura et al (2001)** | Japan | ● | ○ | 1977 | 573 | 40-64 | Males | ● | 0 | ○ | ● | ○ | Reference level: 60-69bpm<br>For>90bpm: mortality risk :RR=2.68 |
| **Okamura et al. (2004)** | Japan | ● | ○ | 1981 | 8,800 | 30 | Both | stroke | 1 | ○ | ○ | ○ | For 11bpm increase: CHD+HF, non-CV and all-cause death: insignificant for both men/women.<br>For highest quartile (HR>74bpm vs <60bpm), CHD+HF HazR=3.99 in younger men. HR not associated with cerebral infarction, cerebral haemorrhage |
| **Tverdal et al. (2008)[10]** | Norway | ● | ○ | 1985 | 379,843 | 40-45 | Both | ● | 0 | ● | ○ | ● | In HR>95bpm vs <80bpm and every 10bpm: SCD insignificant<br>In HR >95bpm vs <65bpm: Stroke death insignificant in both sexes, CVD and IHD death significant only in men |
| **Hsia et al. (2009)[11]** | USA | ● | ○ | 1993 | 129,135 | 50-79 | Women | stroke | 1 | ○ | ○ | ○ | Reference level 1$^{st}$ quintile (<62bpm)<br>For HR>76bpm: MI or coronary death: HazR=1.68<br>Stroke: HazR=1.23<br>For HR 71-76bpm (4$^{th}$ quintile), mild risk of HazR=1.21 in both |
| **Cooney et al. (2010)** | Finland | ● | ○ | 1972 | 21,853 | 25-74 | Both | ● | 0 | ○ | ○ | ϴ | *For each 15 bpm*: CVD, CHD and total mortality significant in men/women, MI (non-fatal)+CHD death insignificant for men |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | *>90bpm vs <60bpm* was associated with a 2-fold increased risk of CVD mortality in men and 3-fold increased risk in women |
| **Jensen et al. (2012)** | Denmark | ● | ○ | 1976 | 6,518 | 56.2 | Males | ● | 0 | ○ | ○ | ○ | For every 10bpm HR: CVD mortality: HazR=1.21.<br>All-cause HazR=1.15 |
| **Jensen et al. (2013)[12]** | Denmark | ● | ○ | 1970 | 2,798 | 63 | No | ● | 0 | ○ | ○ | ○ | Reference level: <50bpm<br>$5^{th}$ quintile(>90bpm):All-cause mortality risk: HazR=3.06 |
| **Nanchen et al. (2013)[13]** | Netherlands | ● | ○ | 1993 | 4,768 | ≥55 | Both | HF | 1 | ○ | ○ | ɵ | Per 10 bpm in men, risk of HF: HazR=1.14 (1.03–1.27)<br>***No association found in women*** |
| **Opdahl et al. (2014)** | USA | ● | ○ | 2000 | 6,814 | 45-84 | Both | HF | 1 | ○ | ○ | ● | Per 1bpm: Heart failure incidence: HR=1.04(1.02-1.06),<br>Quartile analysis reference level: <57bpm<br>For >69bpm ($4^{th}$ quartile): HR=3.76 (2.00–7.07).<br>Risk consistent for $2^{nd}$, $3^{rd}$quartiles. |
| **Woodward et al. (2014)[14]** | Asia-Pacific region | ● | ○ | - | 112,680 (12 cohorts) | 51 (mean) | Both | Heart Failure death, Total, haemorrhagic, ischaemic, unclassified stroke | 5 | ● | ○ | ● | For 80þ ($4^{th}$ quartile) v <65 bpm HR=1.44 (1.29–1.60) for CV and 1.54 (1.43–1.66) for total mortality<br>Similarly for ischemic and haemorrhagic stroke<br>HR=2.08 for HF (1.07–4.06) and CHD HR=1.11 lower (0.93–1.31) |
| **CALIBER study** | **UK** | | ● | **1997** | **233,970** | **>30** | Both | ● | 11 | ● | ● | In UCD no association with women was found | Reference level: <60bpmHeart rates >80bpm have an increased risk of heart failure and unheralded coronary death and a risk of sudden cardiac death for heart rate >90bpm. No association with CAD endpoints, cerebrovascular, or peripheral vascular diseases. Apparent threshold for effect on SCD with the linear association confined to heart rate values >85bpm. |

**Abbreviations: HER, electronic health records; HazR, Hazard Ratio; HR, heart rate; Q, quintile; CAD, coronary artery disease; CVD, cardiovascular disease; MI, myocardial infarction; HF, heart failure; AF, atrial fibrillation; SCD, sudden cardiac death; In test sex interaction: ● denotes tested and women had similar results as men; ɵ denotes weaker associations in women; ○ denotes no testing**

## METHODS

Figure S1. Study Flow diagram

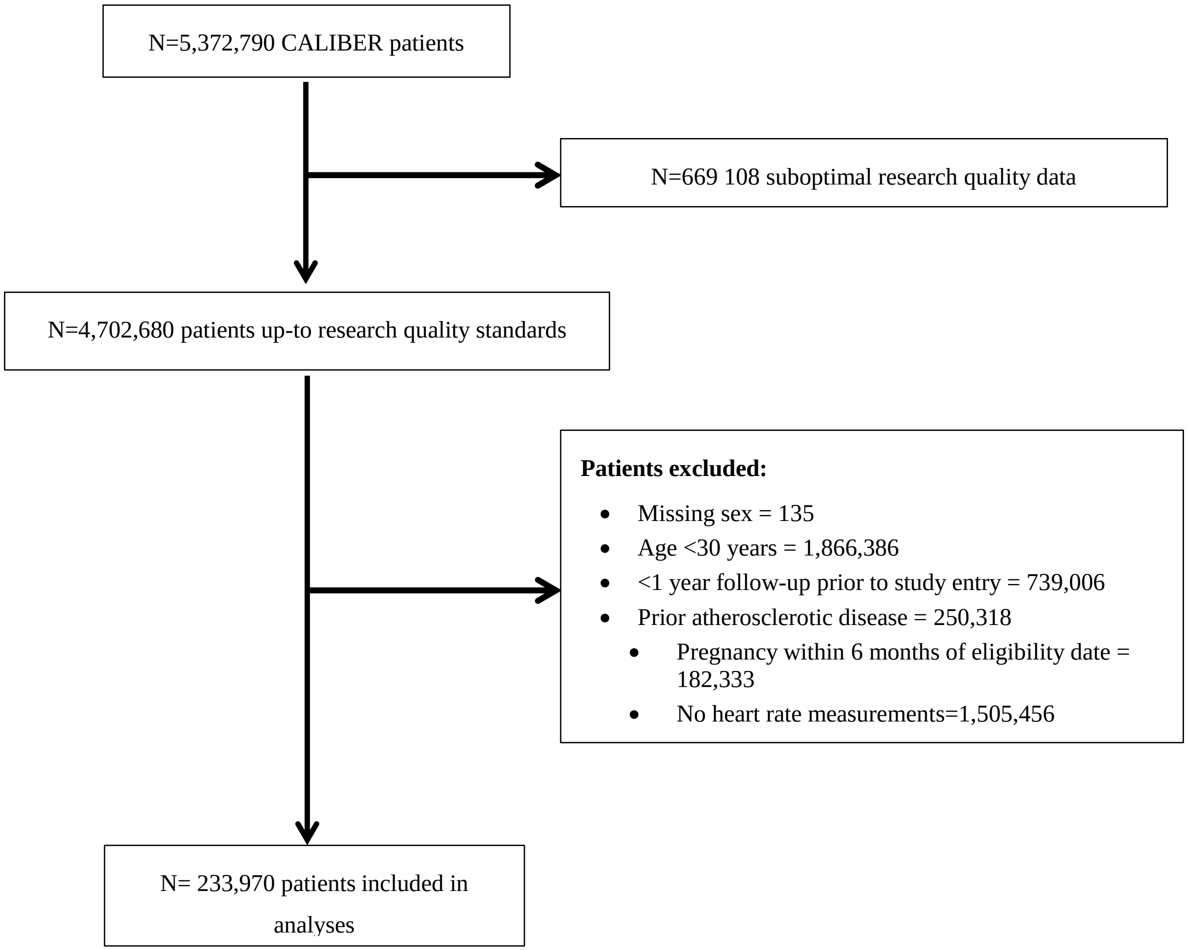
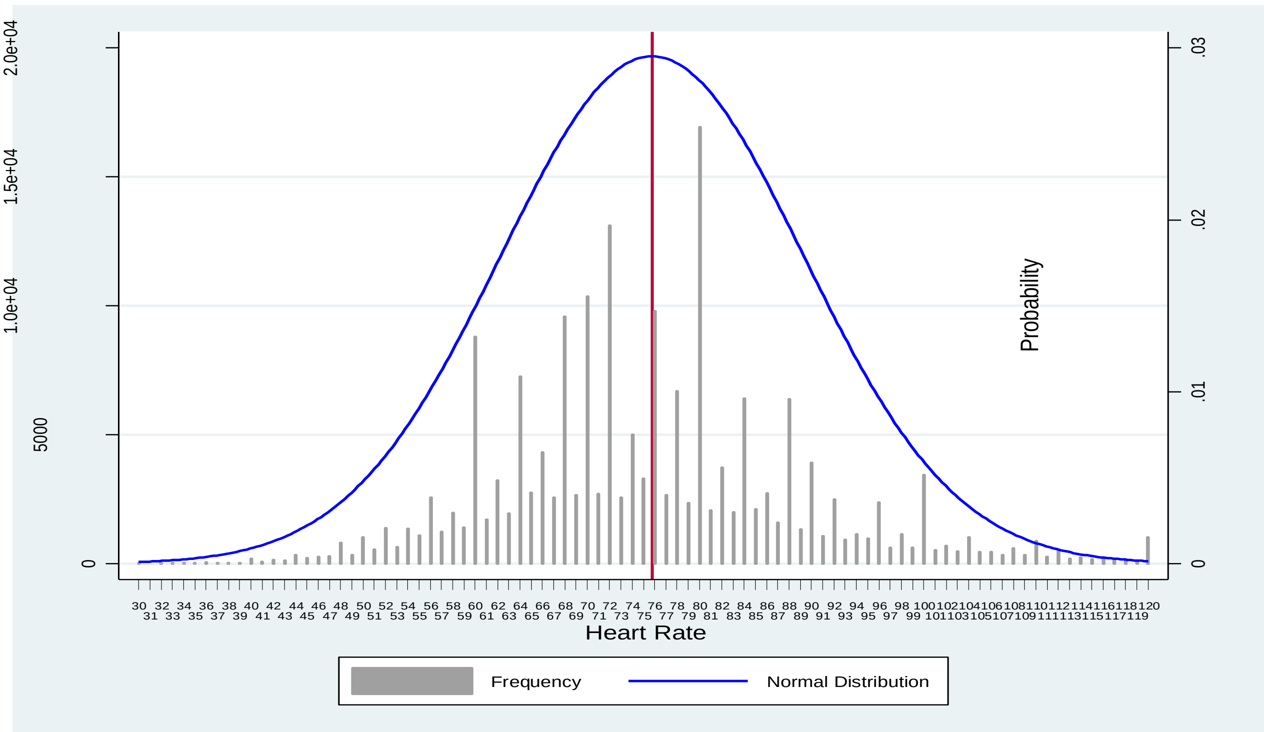
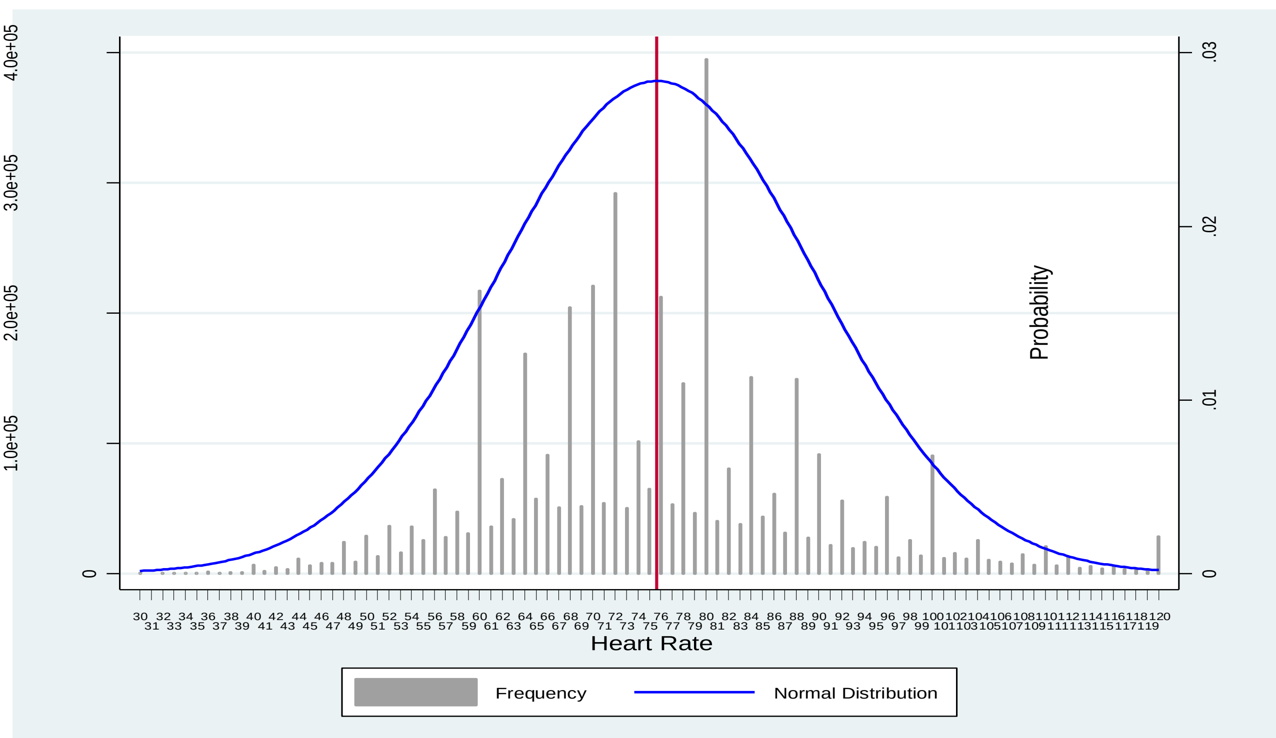


Figure S2. Heart rate distribution in people with heart rate measured a)on the same day as blood pressure recording, b)different date from blood pressure recording




a




b

S3. Multiple imputation

Baseline risk factor data appeared to be missing at random after adjusting for major confounders (e.g. age, sex, systolic blood pressure, etc.). Hence, multiple imputation was implemented using multiple chained equations[15] as implemented in the *mi impute chained* algorithm in the statistical package Stata (v13), to replace missing values in exposure and risk factor variables. Imputation models were estimated separately for men and women and included:

i) all the baseline covariates used in the main analysis (age, quadratic age, smoking, diabetes, beta-blockers prescription, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, triglycerides, haemoglobin, creatinine, BMI and social deprivation) including outcomes;

ii) prior (between 1 and 4 years before study entry) and post (between 0 and 1 year after study entry) averages of continuous covariates in the main analysis;

iii) baseline measurements of covariates not considered in the main analysis (diastolic blood pressure, alcohol intake, family history of CHD);

iv) baseline medications (statins, blood pressure lowering medication, aspirin, C-channel blockers, B-blockers);

We checked whether the imputations were plausible by comparing plots of the distribution of observed and imputed values of all variables. Non-normally distributed variables were log-transformed for imputation and exponentiated back to their original scale for analysis. Five multiply imputed datasets were generated, and Cox models were fitted to each dataset. Coefficients were combined using Rubin’s rules.

## RESULTS

### *Baseline characteristics*

Table S3. Baseline characteristics of patients with and without resting heart rate recording in primary care

| | **Heart Rate non recorded** | **Heart rate recorded** |
|---|---|---|
| | Mean (% proportion) | Mean (% proportion) |
| **Demographic factors** | | |
| Age at entry (years) | 46.2 | 58.3 |
| Women, % | 44.8 | 56.2 |
| Non-white ethnicity, % | 29.7 | 26.8 |
| Deprivation (most deprived quintile), % | 19.6 | 22.9 |
| **Clinical biomarkers and risk factors** | | |
| Heart rate (continuous) (bpm) | - | 76.52 |
| Systolic blood pressure, (mmHg) | 129.9 | 139.8 |
| Diastolic blood pressure, (mmHg) | 78.7 | 81.6 |
| High density lipoprotein cholesterol, (mmol/L) | 1.40 | 1.43 |
| Low density lipoprotein cholesterol, (mmol/L) | 3.30 | 3.18 |
| Total cholesterol (mmol/L) | 5.45 | 5.33 |
| Creatinine μmol/L | 85.4 | 88.0 |
| BMI ( kg / $m^2$) | 26.3 | 28.2 |
| *Smoking* | | |
| Non-smokers, % | 60.0 | 60.8 |
| Ex-smoker, % | 13.7 | 15.7 |
| Current smoker, % | 26.2 | 23.3 |
| Diabetes type 2, % | 1.24 | 5.26 |
| **Medication** | | |
| Beta blockers, % | 4.12 | 14.3 |
| Calcium channel blockers, % | 2.35 | 11.9 |
| Blood pressure lowering medication, % | 22.3 | 56.4 |
| Statins, % | 1.79 | 11.4 |
| Aspirin, % | 1.60 | 8.61 |

Table S4. Age adjusted hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite endpoints

| ***Outcomes*** | N of events | <60bpm | 60-69bpm | 70-79bpm | 80-89bpm | >90bpm | P-value for sex |
|---|---|---|---|---|---|---|---|
| ***CARDIAC*** | | | HR | HR | HR | HR | |
| ***Stable Angina*** | | | | | | | |
| **Men** | 823 | 1.00(ref) | 1.06[0.81-1.38] | 1.20[0.931.55] | 1.41[1.08- | 1.19[0.88- | 0.0012 |
| **Women** | 750 | 1.00(ref) | 0.60[0.45-0.81] | 0.59[0.45-0.78] | 0.68[0.52- | 0.60[0.44- | |
| ***Unstable Angina*** | | | | | | | |
| **Men** | 429 | 1.00(ref) | 0.69[0.49-0.98] | 0.97[0.70-1.35] | 0.93[0.66- | 1.20[0.84- | 0.0471 |
| **Women** | 528 | 1.00(ref) | 0.89[0.61-1.30] | 0.82[0.57-1.18] | 0.95[0.66- | 0.80[0.54- | |
| ***Myocardial infarction*** | | | | | | | |
| **Men** | 1,113 | 1.00(ref) | 1.16[0.92-1.46] | 1.22[0.97-1.54] | 1.34[1.06- | 1.54[1.20- | 0.5274 |
| **Women** | 908 | 1.00(ref) | 0.98[0.72-1.34] | 1.05[0.78-1.41] | 1.09[0.81- | 1.05[0.77- | |
| ***Unheralded coronary death*** | | | | | | | |
| **Men** | 530 | 1.00(ref) | 1.07[0.71-1.59] | 1.70[1.16-2.48] | 2.23[1.53- | 3.33[2.26- | 0.0252 |
| **Women** | 555 | 1.00(ref) | 0.86[0.58-1.29] | 0.97[0.66-1.42] | 1.09[0.74- | 1.34[0.90- | |
| ***Heart Failure*** | | | | | | | |
| **Men** | 1,038 | 1.00(ref) | 1.18[0.89-1.56] | 1.65[1.26-2.16] | 2.12[1.62- | 3.38[2.57- | 0.0015 |
| **Women** | 1,502 | 1.00(ref) | 0.78[0.61-1.00] | 0.81[0.64-1.03] | 1.19[0.94- | 1.60[1.26- | |
| ***Sudden cardiac death/*** | | | | | | | |
| **Men** | 442 | 1.00(ref) | 0.90[0.62-1.29] | 1.00[0.70-1.43] | 1.16[0.81- | 2.50[1.76- | 0.5181 |
| **Women** | 285 | 1.00(ref) | 0.86[0.47-1.56] | 1.04[0.59-1.82] | 1.23[0.70- | 2.38[1.37- | |
| ***Coronary heart disease (NOS)*** | | | | | | | |
| **Men** | 1,038 | 1.00(ref) | 0.75[0.61-0.93] | 0.88[0.72-1.08] | 0.82[0.66- | 0.95[0.75- | 0.6825 |
| **Women** | 883 | 1.00(ref) | 0.87[0.66-1.15] | 0.89[0.68-1.16] | 0.75[0.57- | 0.76[0.57- | |
| ***CEREBRAL*** | | | | | | | |
| ***Transient Ischaemic Attack*** | | | | | | | |
| **Men** | 659 | 1.00(ref) | 0.87[0.66-1.15] | 0.84[0.64-1.11] | 1.17[0.89- | 1.07[0.78- | 0.0457 |
| **Women** | 1,010 | 1.00(ref) | 0.94[0.71-1.26] | 0.98[0.75-1.29] | 0.90[0.68- | 1.05[0.78- | |
| ***Subarachnoid Haemorrhage*** | | | | | | | |
| **Men** | 30 | 1.00(ref) | 0.59[0.16-2.23] | 1.08[0.33-3.54] | 1.18[0.34- | 0.75[0.17- | 0.9369 |
| **Women** | 97 | 1.00(ref) | 0.57[0.21-1.50] | 0.82[0.34-2.01] | 1.11[0.46- | 0.80[0.31- | |
| ***Intracerebral Haemorrhage*** | | | | | | | |
| **Men** | 136 | 1.00(ref) | 0.92[0.48-1.76] | 0.96[0.51-1.82] | 1.29[0.68- | 1.96[1.01- | 0.2066 |
| **Women** | 194 | 1.00(ref) | 0.94[0.47-1.88] | 1.18[0.62-2.26] | 1.26[0.65- | 1.18[0.59- | |

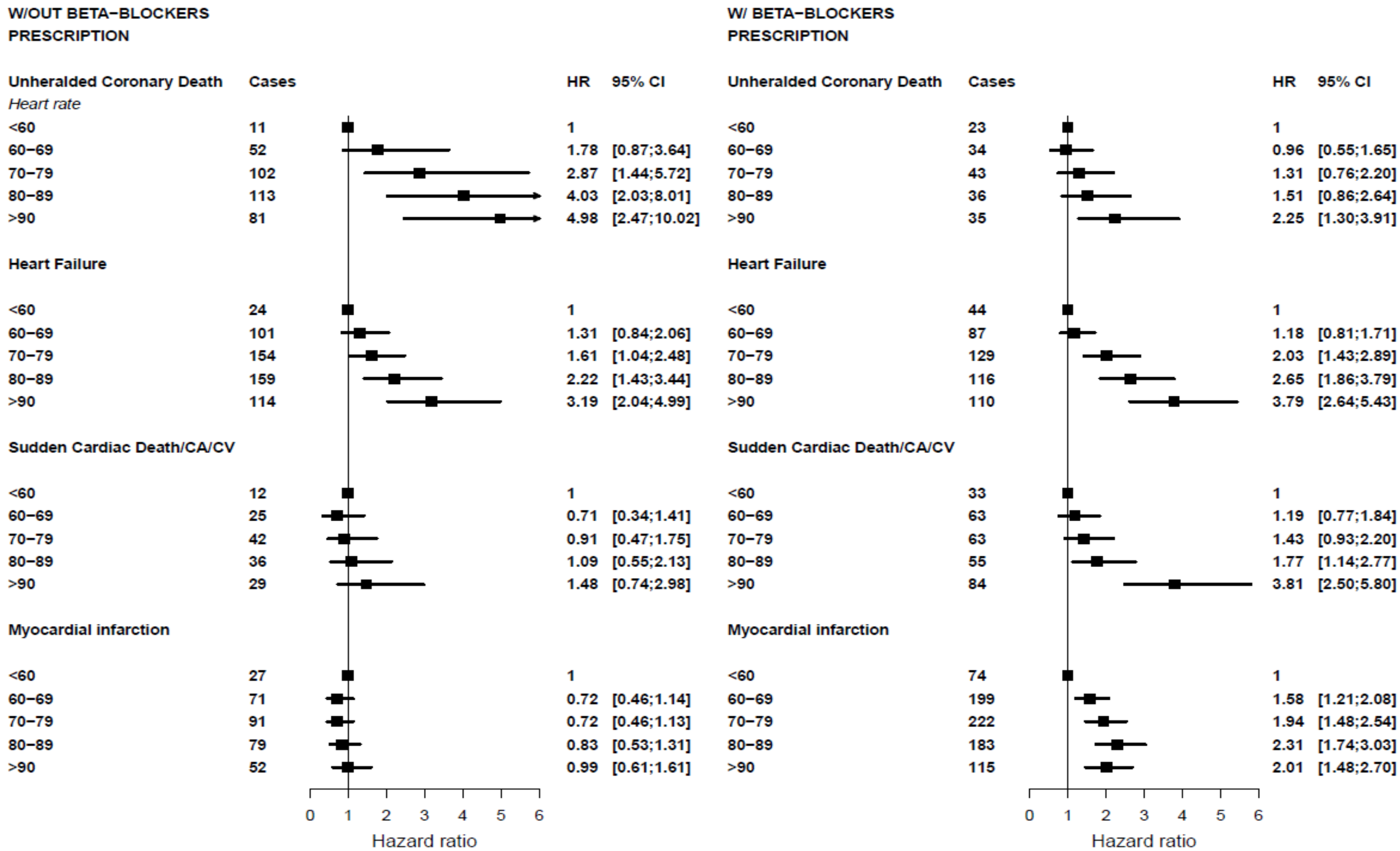
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ***Ischaemic Stroke*** | | | | | | | |
| **Men** | 489 | 1.00(ref) | 0.77[0.56-1.06] | 1.04[0.77-1.41] | 1.03[0.75- | 0.98[0.68- | 0.2459 |
| **Women** | 780 | 1.00(ref) | 0.89[0.66-1.21] | 0.82[0.61-1.10] | 0.75[0.56- | 1.03[0.76- | |
| ***PERIPHERAL*** | | | | | | | |
| ***Peripheral Arterial Disease*** | | | | | | | |
| **Men** | 685 | 1.00(ref) | 1.52[1.11-2.08] | 1.53[1.12-2.09] | 1.93[1.41- | 1.80[1.27- | 0.0127 |
| **Women** | 802 | 1.00(ref) | 0.83[0.60-1.15] | 0.97[0.71-1.32] | 0.94[0.69- | 1.21[0.88- | |
| ***Abdominal Aortic Aneurysm*** | | | | | | | |
| **Men** | 320 | 1.00(ref) | 0.86[0.58-1.29] | 0.96[0.65-1.43] | 1.16[0.77- | 1.07[0.67- | 0.4348 |
| **Women** | 150 | 1.00(ref) | 0.68[0.33-1.38] | 0.84[0.43-1.63] | 0.71[0.36- | 1.04[0.51- | |
| ***COMPOSITES*** | | | | | | | |
| ***Total CVD events*** | | | | | | | |
| **Men** | 12,439 | 1.00(ref) | 1.02[0.95-1.09] | 1.18[1.10-1.26] | 1.41[1.32- | 1.71[1.59- | <0.0001 |
| **Women** | 15,942 | 1.00(ref) | 0.97[0.90-1.05] | 1.00[0.93-1.08] | 1.14[1.06- | 1.36[1.26- | |
| ***CVD mortality*** | | | | | | | |
| **Men** | 1,613 | 1.00(ref) | 1.05[0.86-1.28] | 1.25[1.03-1.51] | 1.55[1.28- | 1.75[1.43- | 0.0001 |
| **Women** | 2,369 | 1.00(ref) | 1.01[0.83-1.22] | 0.92[0.77-1.10] | 1.10[0.92- | 1.08[0.89- | |
| ***All-cause mortality*** | | | | | | | |
| **Men** | 3,968 | 1.00(ref) | 1.22[1.06-1.40] | 1.66[1.45-1.89] | 2.12[1.86- | 3.10[2.70- | 0.0124 |
| **Women** | 7,023 | 1.00(ref) | 1.28 [1.11-1.48] | 1.49 [1.30-1.71] | 1.73 [1.51- | 2.50 [2.18- | |

Note: CA-SCD, sudden cardiac death and cardiac arrest; CI, confidence interval. Hazard ratios adjusted for age

[ɪ] P-values from Wald test for sex/heart rate interaction

## *Sensitivity analysis*

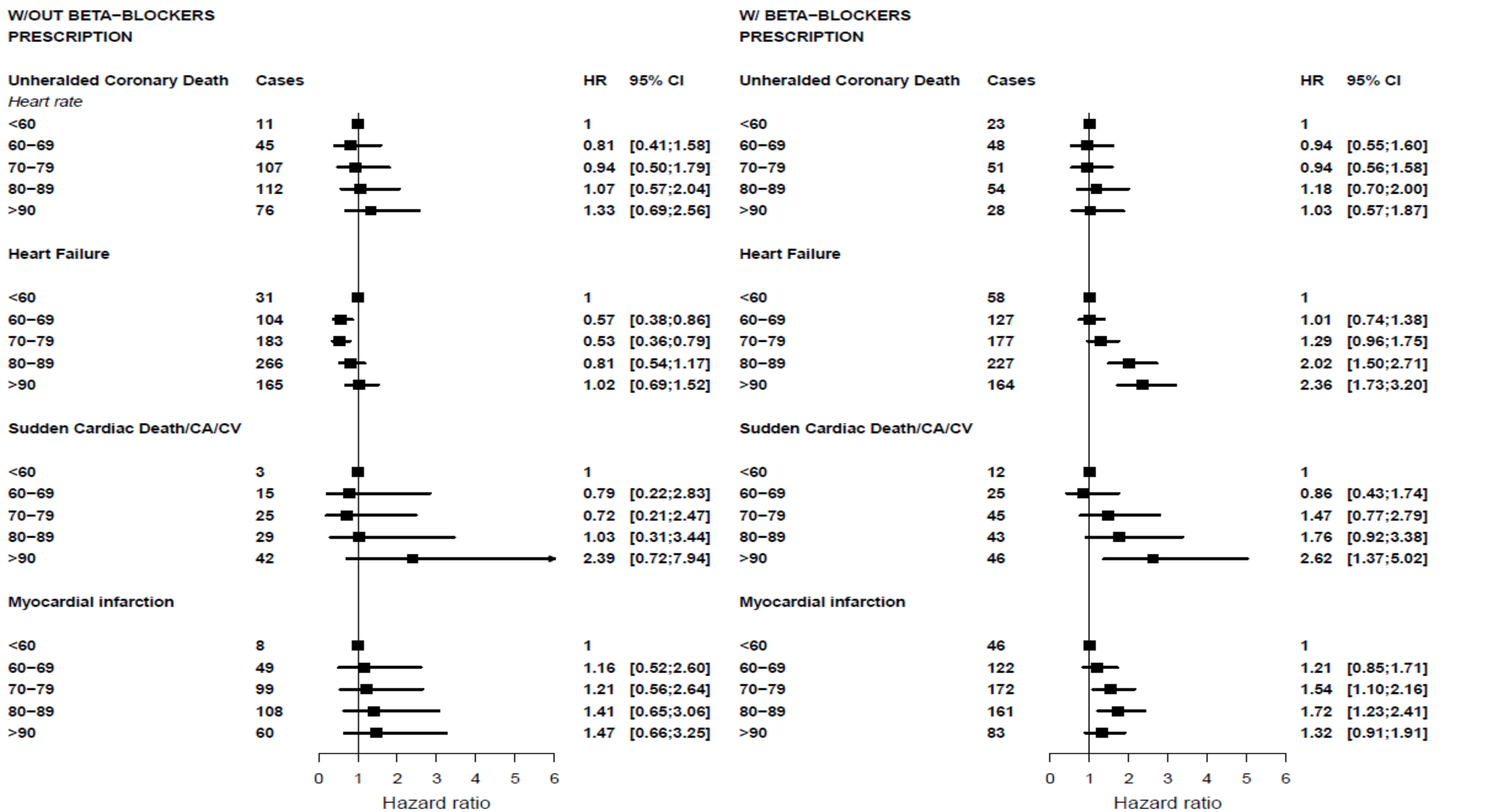
Figure S3. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of heart failure, unheralded coronary death, sudden cardiac death or ventricular arrhythmia and myocardial infarction in men without a beta-blocker prescription (N= 65,866) at baseline, vs men with a beta-blocker prescription (N= 32,325)




Note: CI, confidence interval; HR, Hazard ratio; CA, Cardiac Arrest; CV, Cardioversion

*Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, type 2 diabetes and BMI (covariate data imputed)

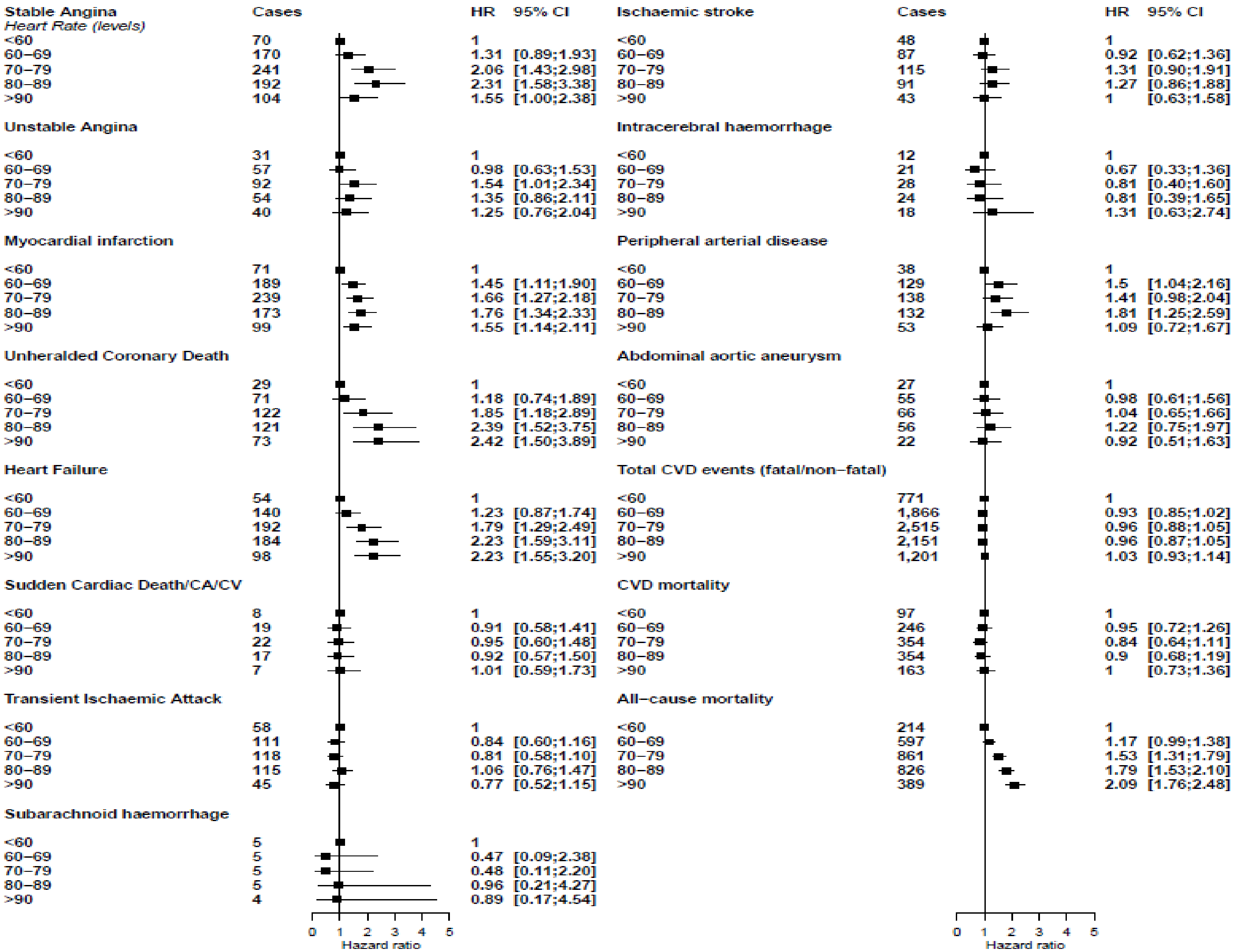
Figure S4. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of heart failure, unheralded coronary death, sudden cardiac death or ventricular arrhythmia and myocardial infarction in women without a beta-blocker prescription (N= 87,399) at baseline, vs women with a beta-blocker prescription (N= 48,200)




Note: CI, confidence interval; HR, Hazard ratio; CA, Cardiac Arrest; CV, Cardioversion

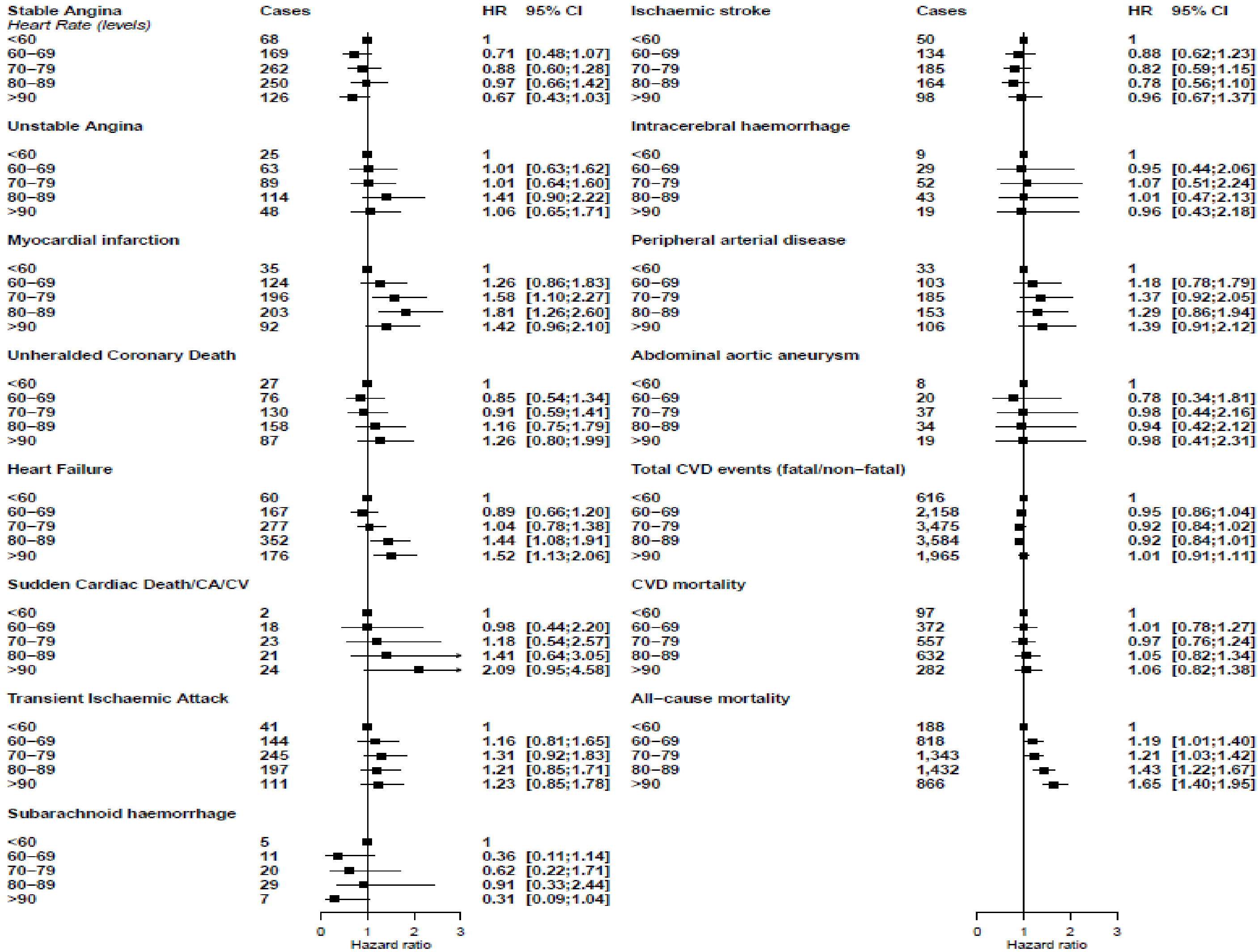
*Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol,, type 2 diabetes and BMI (covariate data imputed)

Figure S5. Hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men after exclusion of cardiovascular events during the first year after heart rate measurement (N=77,843)



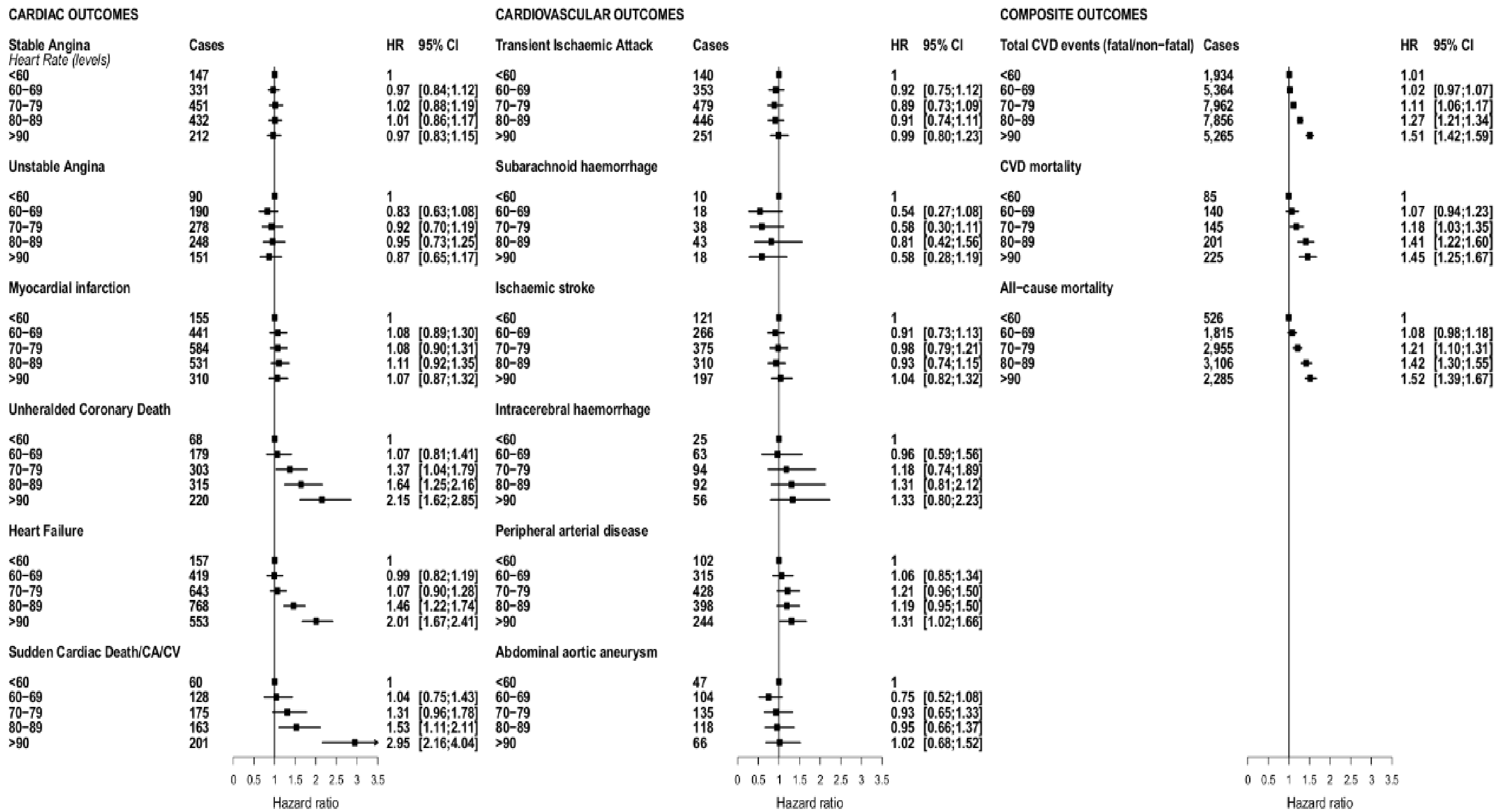

Note: Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, diabetes 2 and BMI measured at baseline (covariate data imputed); CI, confidence interval; HR, hazard ratios; CA, Cardiac Arrest; CV, Cardioversion

Figure S6. Hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in women after exclusion of cardiovascular events during the first year after heart rate measurement (N=110,113)



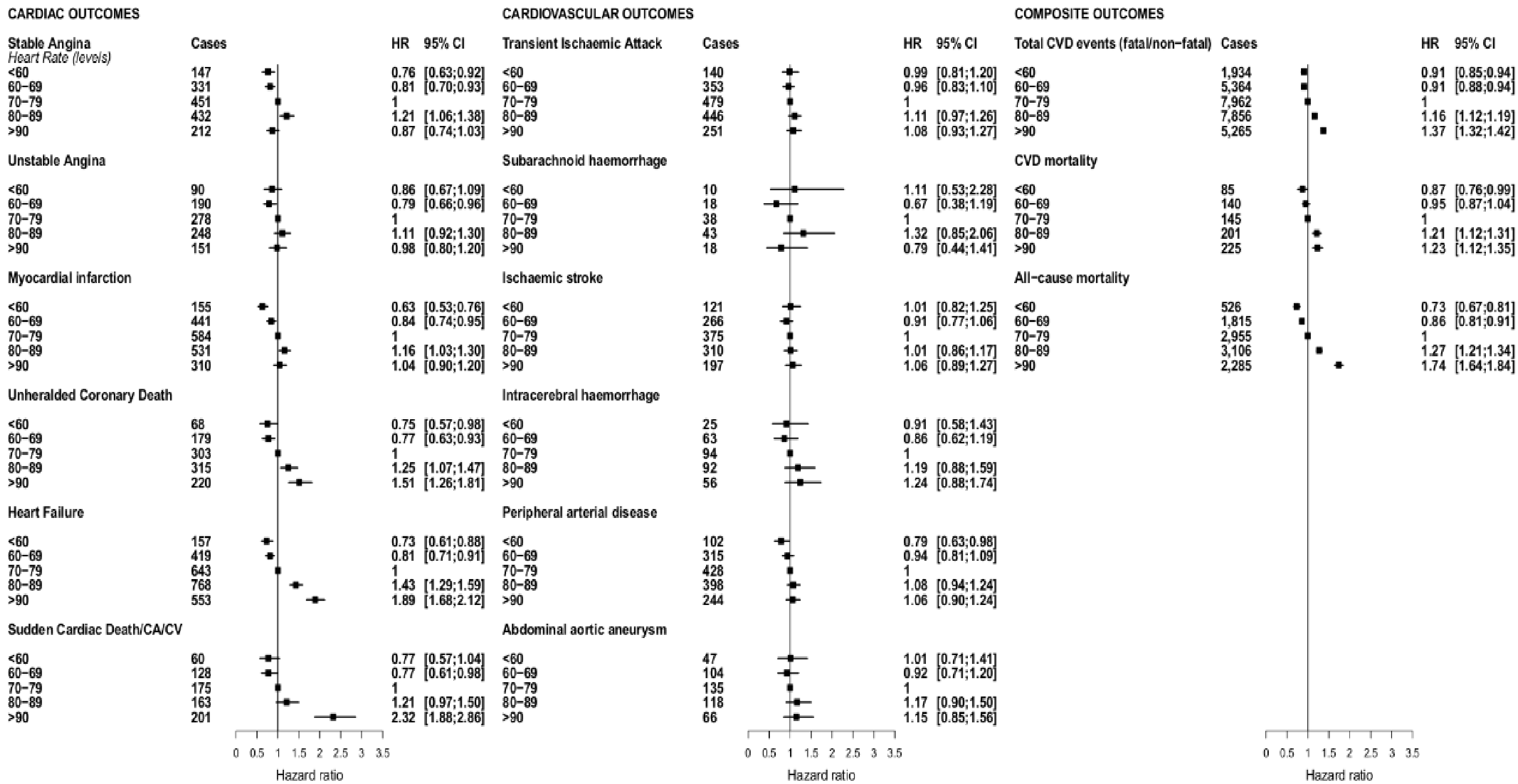

Note Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol,, diabetes 2 and BMI measured at baseline (covariate data imputed); CI, confidence interval; HR, hazard ratios; CA, Cardiac Arrest; CV, Cardioversion

Figure S7. Hazard ratios for the association between average repeated heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men and women (N=233,970)



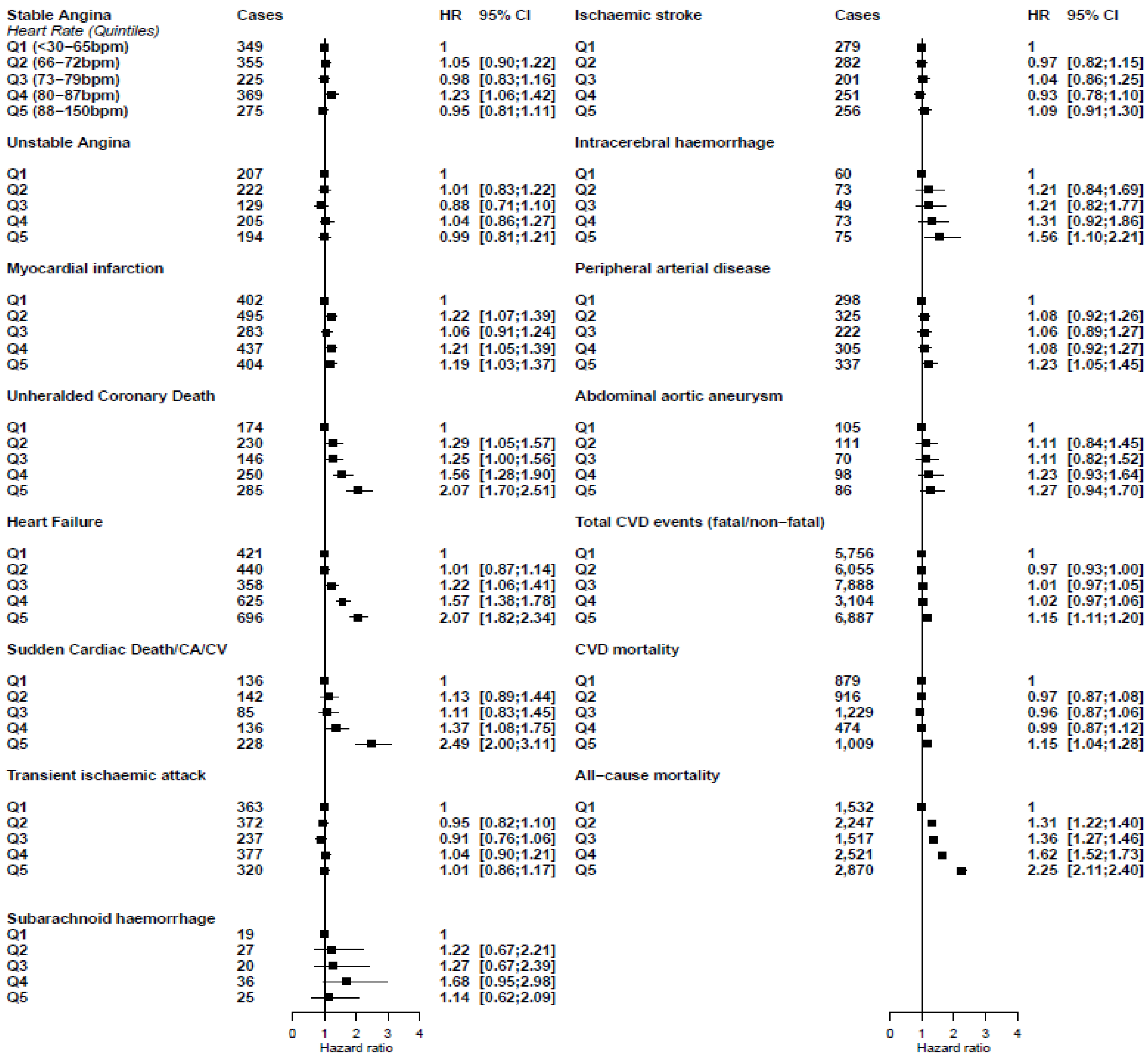

Note Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol,, diabetes 2 and BMI measured at baseline (covariate data imputed); CI, confidence interval; HR, hazard ratios; CA, Cardiac Arrest; CV, Cardioversion

Figure S8. Multivariable adjusted* hazard ratios for the association between heart rate and the initial presentation of 12 cardiovascular diseases and composite outcomes in men and women (N=233,970) using as heart rate reference level 70-79bpm




Note *Hazard ratios from models stratified by primary care practice and adjusted for age (continuous and quadratic terms), social deprivation, smoking, systolic blood pressure, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, diabetes 2 and BMI measured at baseline (covariate data imputed); CI, confidence interval; HR, hazard ratios; CA, Cardiac Arrest; CV, Cardioversion

Figure S9. Hazard ratios (95% CIs) for the association between heart rate quintiles in 12 cardiovascular diseases and mortality




Note: Hazard ratios adjusted for sex, age, quadratic age, interaction between heart rate and sex, social deprivation, smoking, systolic blood pressure, beta-blockers, total cholesterol, HDL, LDL, diabetes II and BMI measured at baseline (stratification by primary care practice (data imputed); CI, confidence interval; HR, hazard ratios; CA, Cardiac Arrest; CV, Cardioversion

Table S5. Hazard ratios (95%CI) for a 10bpm increase in the clinical RHR for those with a heart rate of 65bpm or more

| | 10 bpm increase above 65bpm | | |
|---|---|---|---|
| | CALIBER | CALIBER† | Woodward et al. |
| **Outcome** | N=185,150 | | N=97,704 |
| Total mortality | 1.11 (1.09-1.13) | 1.18 (1.15-1.22) | 1.40 (1.33-1.48) |
| CVD death | 1.10 (1.07- 1.13) | 1.18 (1.13-1.23) | 1.42 (1.30-1.55) |
| Heart Failure death | 1.16 (1.05-1.27) | 1.28 (1.09-1.49) | 1.67 (1.06-2.64) |
| CVD* | 1.08 (1.06-1.09) | 1.13 (1.10-1.16) | 1.36 (1.26-1.47) |
| CHD* | 1.05 (1.03-1.07) | 1.08 (1.04-1.12) | 1.18 (1.03-1.35) |
| Total stroke* | 1.02 (0.99-1.05) | 1.04 (0.99-1.09) | 1.32 (1.17-1.48) |
| Subarachnoid Haemorrhage | 0.94 (0.81-1.08) | 0.90 (0.71-1.14) | 1.29 (1.07-1.57) |
| Ischaemic stroke* | 1.03 (0.99-1.08) | 1.05 (0.98-1.13) | 1.28 (1.06-1.56) |
| Unclassified stroke* | 1.02 (0.98-1.05) | 1.03 (0.97-1.09) | 1.44 (1.16-1.78) |

*Fatal and nonfatal events combined; RHR: resting heart rate, bpm: beats per minute; CHD: Coronary heart disease. Estimates are adjusted for age and systolic blood pressure.

†After correction for dilution bias using the method of MacMahon and Peto[16]

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