

Supplementary Table. Basic characteristics of the 31 articles in the systematic review.

Author, year	Country	Population	Sample size (n)	Age (years) Mean $\pm$ SD	F/U (M) Mean	Endpoint (Number of cases, %)	Measurement	Covariates in the fully adjusted model	HRV cut-off point for prediction endpoint
Ablonskyte-Dudoniene, 2012	Lithuania	MI	208	63	60	Cardiac death (n = 15, 5.2%) All-cause death (n = 22, 4.8%)	24-h ECG TD: SDSD; SDNN; SDANN; rMSSD; pNN50 FD: TP; VLF; LF; HF	HRV parameter, CO, CI, SV, previous MI, impaired mobility, localization of index MI, Killip class, LVEF, CCI, SVI, CPO, CPI	Cardiac death: SDANN $\leq$ 85.41 ms All-cause death: SDNN $\leq$ 100.24 ms
Al-Zaiti, 2014	USA	Ischemic cardiomyopathy	197 M = 183 F = 14	67.2 $\pm$ 11.4	49	Sudden cardiac death (n = 30, 15%) Cardiac nonsudden death (n = 35, 18%)	5-min ECG TD: SDNN	Age, diabetes, prolonged QTc, sudden cardiac arrest or equivalent, cardiovascular non-sudden death, persistent BiV pacing	All-cause death: SDNN < 80 ms
Anastasiou-Nana, 2005	USA	Heart failure	52 M = 46 F = 6	56 $\pm$ 12	24	All-cause death (n = 14, 26.9%) Sudden death (n = 4, 7.6%)	24-h ECG TD: mRR; SDNN; SDANN; SDSD; rMSSD; pNN50 FD: TP; LF; HF; LF/HF	LVEF, pulmonary capillary wedge, HRV parameters	Sudden death: HF (ms ²)

Aronson, 2004	USA	Heart failure	199 M = 131 F = 68	60 ± 14	12	All-cause death (n = 40, 20.1%)	24-h ECG TD: mRR; SDNN; SDANN; ASDNN; rMSSD; pNN50 FD: TP;ULF; VLF; LF; HF; LF/HF;	Age, sex, diabetes status, primary etiology of heart failure stratified as ischemic or nonischemic, serum sodium, serum creatinine, medications (β- blocker or amiodarone use), presence of ventricular arrhythmias on 24-h electrocardiographic recordings, history of ventricular fibrillation, resuscitated cardiac arrest, or automatic ICD implantation	SDNN < 44 ms SDANN < 37 ms TP < 1475 ms ² ULF < 1100 ms ²
Batchvarov, 2004	UK	MI	344 M = 271 F = 73	60 ± 9	41 ± 20	Cardiac death (n = 36, 10.4%) Nonarrhythmic death (n = 19, 5.5%) Arrhythmic death (n = 17, 4.9%)	24-h ECG TD: TI	LVEF, VE/h, tQRS (ms), (tQRS) slope (ms/RR), TCRT	HRV TI < 20U
Bonaduce, 1999	Italy	Heart failure	97	55 ± 13	39 ± 18	Cardiac death (n = 32, 33%)	24-h ECG TD: SDNN;	Age, DBP, LVEF, LVEDV, LVESV,	LF/HF < 1.6 pNN50

								SDANN; rMSSD; pNN50 FD: TP; ULF; VLF; LF; HF; LF/HF	VT, VPBs > 10/h, HRV	
Bošković, 2014	Montenegro	MI	110 M = 80 F = 20	56.99 ± 11.03	12	All-cause death (n = 11, 10%)	24-h ECG TD: SDNN	Age, Killip class, VPCs > 10/h	SDNN ≤ 60.55 ms	
Carpeggiani, 2005	Italy	MI	246 M = 220 F = 26	55 ± 8	96	Cardiac death (n = 30, 12.2%) Nonfatal MI (n = 19, 7.7%)	24-h ECG TD: mRR; SDNN; SDANN; RMSSD; pNN50 FD: LF; HF; LF/HF	Psychological measures, family history of ischemic heart disease, smoking, arterial hypertension, hypercholesterolemia, hypertriglyceridemia , obesity, age, sex, wall motion score index, type of infarction (non-Q vs. Q), creatinine kinase, hospital length of stay, diabetes	HF < 221 ms ²	
Cebula, 2012	Poland	MI	500 M = 352 F = 148	60.6 ± 11.2	13.1 ± 15.1	Major adverse cardiovascular events (n = 116, 23.2%)	24-h EGG TD: TI, SDNN; SDANN;	Age, sex, hypertension, diabetes, incomplete revascularization, cardiogenic shock on	SDNN < 70 ms rMSSD < 20 ms	

							SDNN index; rMSSD	admission, autonomic regulation parameters	
Cygankiewicz, 2015	Poland	Heart failure	192	69 ± 10	41	All-cause death (n = 54, 28.1%) Cardiac death (n = 21, 10.9%) Sudden cardiac death (n = 16, 8.3%)	24-h ECG TD: SDNN; rMSSD; pNN50	Age > 65 years, sex, LVEF ≤ 35%, NYHA class III, diabetes, past-myocardial infarction	Non-HRV parameter predictor
Erdogan, 2008	Germany	MI	412 M = 311 F = 101	60 ± 12	51 ± 36	All-cause death (n = 31, 7.5%)	24-h ECG TD: SDNN; rMSSD	Age, sex, LVEF, diabetes, infarct location, vessel disease	SDNN < 50 ms
Gang, 2011	Denmark	MI	292	not reported	12	High-degree atrioventricular block (HAVB) (n = 28, 10%)	24 h ECG TD: SDNN FD: ULF; VLF; LF; HF	HRV parameters, VPCs/h, NSVT, power law slope, A- ERP	Lower quintile: SDNN; ULF; VLF; LF
Guzzetti, 2005	Italy	Heart failure	330 M = 287 F = 43	54	34	Progressive pump failure death and urgent transplantation (n = 79, 24%) Sudden death (n = 29, 9%)	24-h ECG TD: mRR; SDNN FD: VLF; LF; HF; LF/HF	NYHA class, SBP, LVEF, LVESD, RAP, CI, HRV parameters, VO ₂ , total cholesterol, sodium, bilirubin, β- blockers medication	Cardiac event: VLF ≤ 509 ms ² Sudden death: LF ≤ 20 ms ²
Harris, 2014	USA	ACS	193 M = 110 F = 83	65 ± 13	12	Rehospitalization (n = 82, 42.5%) All-cause death (n = 17, 8.8%)	24-h ECG TD: SDNN; SDANN FD: TP; ULF;	Age, sex, diabetes, history of CAD	Rehospitalization: LF < 50 ms ² ; HF > 42 ms ² ; LF/HF < 0.5

							VLF; LF; HF; LF/HF		
Hayano, 2001	USA	CAD	250 M = 181 F = 69	57 ± 9	99 ± 23	Cardiac death (n = 13, 5.2%) Noncardiac death (n = 12, 4.8%)	10-min ECG FD: TP; LF; HF	Age, sex, hypertension, smoking, cholesterol levels, diabetes, body mass index, previous infarction, ejection fraction, the number of diseased coronary arteries	TP: 5.81 ms HF: 3.89 ms
Ho, 1997	USA	Heart failure	28 M = 16 F = 12	71.8	23	All-cause death (n = 9, 32.1%)	24-h ECG FD: TP, VLF; LF; HF; LF/HF	Age, gender, history of CHF, HRV parameters	HRV parameters not included in multivariate Cox regression analysis
Janszky, 2004	Sweden	CHD	268 F = 268	--	108	All-cause death (n = 17, 6.3%)	24-h ECG TD: SDNN FD: TP; VLF; LF; HF; LF/HF	Age, LVEF, use of β- blockers and triglycerides medication	SDNN ≤ 35 ms TP ≤ 350 ms ² VLF ≤ 752 ms ² LF ≤ 115 ms ² HF ≤ 81 ms ² LF/HF ≤ 1.3
Kiviniemi, 2007	Sweden	MI	590 M = 451 F = 130	61 ± 10	39 ± 14	All-cause death (n = 74, 12.5%) Sudden cardiac death (n = 17, 2.9%) Nonsudden cardiac death (n	24-h ECG TD: mRR; SDNN FD: VLF; LF; HF;	Ejection fraction, age, diabetes	All-cause death: VLF < 6.55 ln ms ² , LF < 5.5 ln ms ² Nonsudden cardiac death:

						= 28, 4.7%) Noncardiac death (n = 29, 4.9%)			SDNN < 90 ms, LF < 5.5 ln ms ²
Kiyono, 2008	Japan	Heart failure	108 M = 42 F = 47	67 ± 14	33 ± 17	All-cause death (n = 39, 36.1%)	24-h ECG TD: SDNN; SDANN; rMSDD FD: ULF; VLF; LF; HF; LF/HF	Age, presence of ischemia, BNP, BUN, Cr	HRV parameters not included in multivariate Cox regression analysis
Kruger, 2002	Germany	Heart failure	222	54.4 ± 0.8	15.1 ± 0.6	Cardiac death or hospitalization (n = 83, 37.39%)	>18-h ECG TD: mRR; SDNN; SDANN; TI	LVEF, NYHA functional class, peak oxygen uptake, HRV parameters, ventricular arrhythmia Lown classes IVb	SDNN < 75 ms
La Rovere, 2003	Italy	Heart failure	444	54 ± 13	36	Derivation validation CHF group: sudden death (n = 19, 9.4%) Validation CHF group: sudden death (n = 20, 8%)	5-min ECG TD: mRR; SDSD FD: LF; HF; LF/HF	Age, sex, NYHA class, cause, LVEF, LVESD, deceleration time, mitral regurgitation grade, cardiopulmonary exercise testing, BUN, creatinine, sodium, potassium, bilirubin, HRV parameters, ACE inhibitors/AT1 receptor antagonist, diuretics, nitrates,	Derivation validation CHF group: sudden death: controlled- breathing LF ≤ 13 ms ² Validation CHF group: sudden death: controlled- breathing LF ≤ 11 ms ²

								digoxin, β -blockers, amiodarone	
Lanza, 1998	Italy	MI	239 M = 195 F = 44	61 $\pm$ 11	28	Cardiac death (n = 9, 3.7%) Sudden death (n = 12, 5.0%)	24-h ECG TD: mRR; SDNN; SDANN; rMSSD; pNN50 FD: TP; ULF; VLF; LF; HF; LF/HF;	Age, sex, LVEF < 40%, VPCs > 10/h, previous MI, HRV parameters	Cardiac death: Non-HRV parameter predictor Sudden death: LF/HF < 1.05
Liu, 2003	Taiwan	MI	260 M = 157 F = 103	59.9 $\pm$ 9.8	67	Cardiac death (n = 55, 21.2%) Sudden cardiac death (n = 39, 15%)	24 h EGG TD: mRR; SDNN; SDANN; rMSSD; pNN50	Age > 70 years, short run VT, VPCs $\geq$ 10/h, diabetes mellitus, LVEF < 45%, ACE inhibitor, Killip status >II	SDNN < 30 ms
Liu, 2014	USA	ACS	1082 M = 400 F = 682	62.5	12	Cardiac death (n = 45, 4.5%)	5-min EGG TD: SDNN; ASDNN; SDANN; rMSSD; pNN50; TI FD: TP; ULF; VLF; LF; HF; LF/HF	LVEF, BNP, TRS	Non-HRV parameter predictor
Lucreziotti, 2000	Italy	Heart failure	75 M = 65 F = 10	50.5 $\pm$ 10.9	12	Cardiac death (n = 11, 14.7%) Heart	5-min ECG FD: TP; LF; HF; LF/HF	HR, heart failure score, CI, RVEF	Cardiac event: LF/HF $\leq$ 0.70

						transplantation (n = 15, 0.2%)			
Moore, 2007	UK	ACS	841	60.8 ± 9.7	22 ± 14	All-cause death (n = 24, 2.9%)	5-min ECG TD: SDNN FD: LF; HF	Age, HR, serum sodium, ejection fraction, coronary disease	Decreasing LF dichotomized by median value
Nolan, 1998	UK	Heart failure	433	62.0 ± 9.6	15.9 ± 5.4	All-cause death (n = 54, 12.5%) Cardiac death (n = 42, 9%)	24-h ECG TD: SDNN; rMSSD; sNN50	Age, NYHA grade, frusemide dose, LVESD, FSI, serum sodium, cardiothoracic ratio, HRV parameters	All-cause death: SDNN < 93.4 ms Cardiac death: SDNN < 74.0 ms
Perkiomaki, 2008	USA	MI	675 M = 503 F = 172	64 ± 9	30	Nonfatal acute coronary event (n = 98, 14.5%)	24-h ECG TD: SDNN FD: LF; HF	Age, sex, ejection fraction, functional class, diabetes, medication, power-law slope, short-term scaling exponent, BRS	Cardiac event: LF ≤ 139 ms ²
Sosnowski, 2002	UK	MI	298 M = 233 F = 65	56 ± 10	24	All-cause death (n = 36, 12%) Cardiac death (n = 27, 9.1%)	24-h ECG TD: mRR; SDNN; SDANN	Age, sex, NYHA, LVEF, use of a beta-blocker and digoxin, mRR	Cardiac death: SDNN < 89 ms SDANN < 79 ms
Uznańska-Loch, 2017	Poland	Heart failure	41 M = 16 F = 25	57 ± 14	42.2	Sudden cardiac deaths (n = 2) HF deterioration (n = 2)	24-h ECG TD: SDNN; SDANN; rMSSD; pNN50; TI	Age	HRV parameters not included in multivariate Cox regression analysis

Zuanetti, 1996	USA	MI	567	not reported	33.3	All-cause death (n = 52, 9.2%) Cardiac death (n = 44, 7.8%)	24-h EGG TD: SDNN; rMSSD; pNN50	Age, sex, previous MI, Killip class, late left ventricular dysfunction, diabetes, hypertension, non-Q- wave MI, presence of ventricular arrhythmias, use at discharge of β - blockers, digitalis, antiarrhythmic agents, HR; all the indexes used maintained their prognostic significance	SDNN < 70 ms rMSSD < 17.5 ms
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Notes: MI = myocardial infarction; ACS = acute coronary syndrome; CAD = coronary artery disease; CHD = coronary heart disease; M = male; F = female; F/U = follow up; M = month; ECG = electrocardiogram; TD = time domain; FD = frequency domain; SDSD = standard deviation of successive differences; mRR = mean of RR intervals; SDNN = standard deviation of all normal-to-normal intervals; SDANN = standard deviation of 5-min mean RR intervals; ASDNN = mean of the standard deviation of 5-min mean RR intervals; rMSSD = the square root of the average of the squares of the differences between consecutive RR intervals; pNN50 = the percentage of RR intervals that differ by more than 50 ms; TI = triangular index; ULF = ultra-low frequency; VLF = very low frequency; LF = low frequency; HF = high frequency; LF/HF = Low-to-high-frequency ratio; TP = total power; LVEF = left ventricular ejection fraction; CCI = Charlson comorbidity index; CPO = cardiac power output; SV = stroke volume; CO = cardiac output; CI = cardiac index; SVI = stroke volume index; CPI = heart power index; TCRT = total cosine R-to-T; VE/h = number of ventricular ectopic beats per hour; tQRS = total QRS duration; HRT = heart rate turbulence; LVESV = left ventricular end-systolic volume; DBP = diastolic blood pressure; LVEDV = left ventricular end-diastolic volume; SBP, systolic blood pressure; VT = ventricular tachycardia; VPBs = ventricular premature beats; VPCs = ventricular premature complexes; NYHA = New York Heart Association; NSVT = nonsustained ventricular tachycardia; A-ERP = atrial effective refractory period; LVESD = left ventricular dimension, LVESD = left ventricular end-systolic dimension; RAP = right atrial pressure; BNP = B-type natriuretic peptide; TRS = TIMI risk score; HR = heart rate; RVEF = right ventricular ejection fraction; FSI = fractional shortening index; BRS = baroreflex sensitivity; ICD = implantable cardioverter defibrillator; QTc = corrected QT

interval; VE = pulmonary ventilation; ACE = angiotensin-converting enzyme.