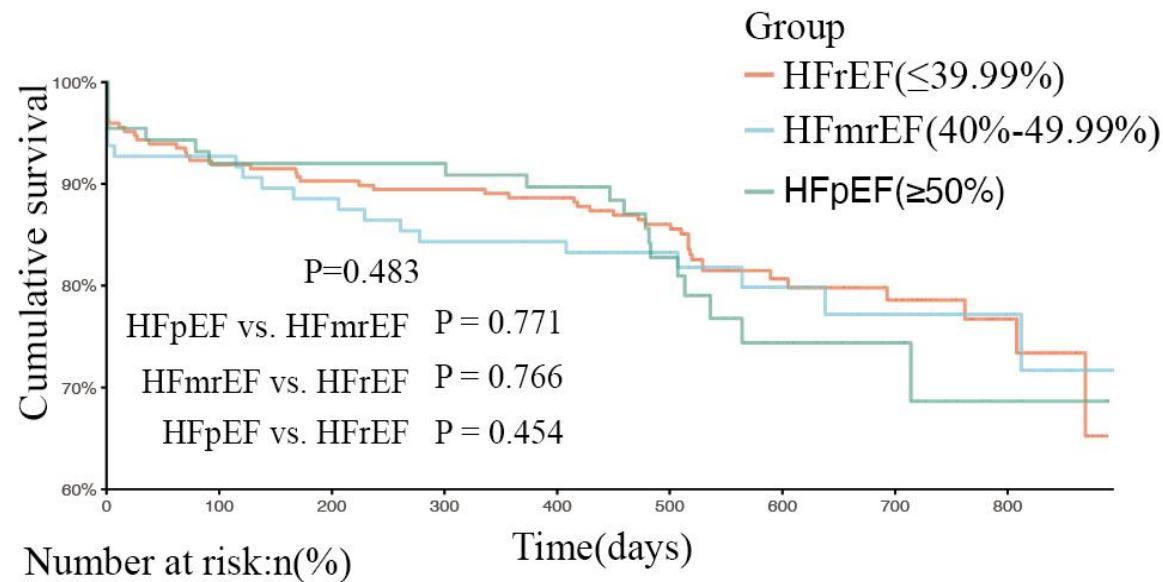


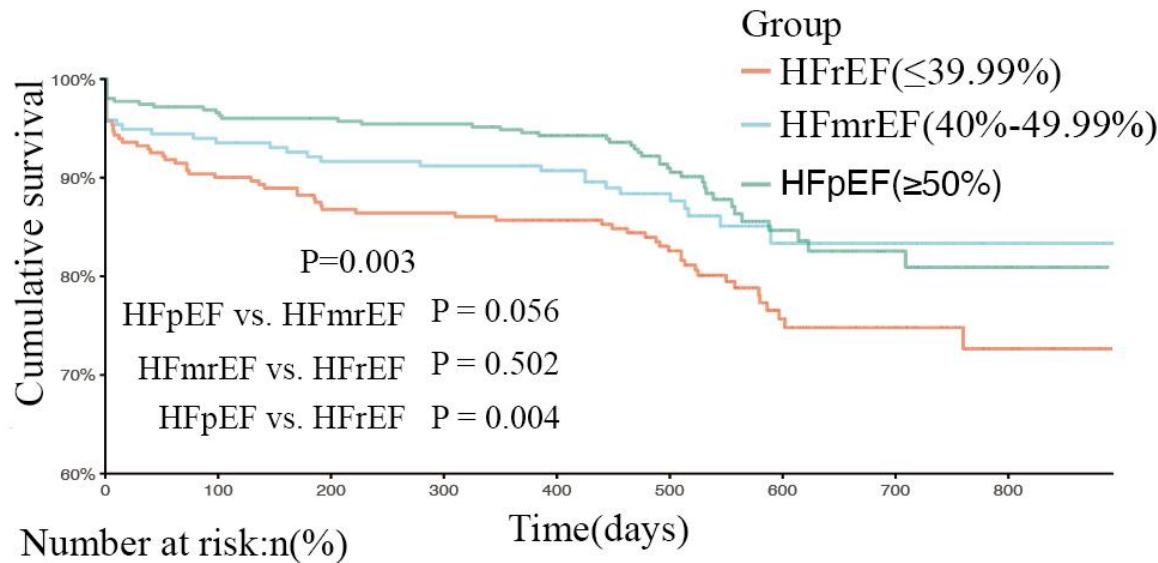
Supplement 1 Multivariable predictors for CV death mortality by ejection fraction category

Variable	HFrEF		HFmrEF		HFpEF	
	HR (95% CI)	P	HR (95% CI)	P	HR (95% CI)	P
QRS(%) ^a						
Q2	–	–	–	–	0.397(0.21-0.749)	0.004
Q3	–	–	–	–	0.371(0.19-0.724)	0.004
Age (years) ^b						
60-69	0.787(0.389-1.591)	0.504	–	–	–	–
≥70	1.98(1.058-3.706)	0.033	–	–	–	–
BMI (kg/m ²) ^c						
24-27.9	–	–	–	–	0.762(0.453-1.282)	0.306
≥28	–	–	–	–	0.172(0.041-0.722)	0.016
Myocardial infarction	–	–	3.731(1.304-10.675)	0.014	1.947(1.062-3.571)	0.031
Hb (g/L)	–	–	0.969(0.944-0.996)	0.022	0.982(0.972-0.992)	0.000
ACE inhibitors/ARBs	0.373(0.223-0.624)	0.000	–	–	–	–
BNP (pg/mL)	1(1-1)	0.003	1(1-1.001)	0.050	1(1-1)	0.010
Sodium (mmol/L)	0.904(0.866-0.944)	0.000	–	–	–	–
LAD (mm)	–	–	1.089(1.03-1.152)	0.003	1.029(1.013-1.046)	0.000
Stroke and TIA	1.876(1.015-3.469)	0.045	–	–	–	–
Creatinine (umol/L)	–	–	1.007(0.999-1.015)	0.067	–	–

Adjusted for gender,age,coronary disease,SBP,DBP,Hb,WBC,FBP,AST,ALT,BNP,TC,LDL-c,Sodium,Creatinine,BUN,BNP,BMI,LAD,LVEDD,QRS fraction,myocardial infarction,stroke and TIA,Diuretics,ACE inhibitors/ARBs.

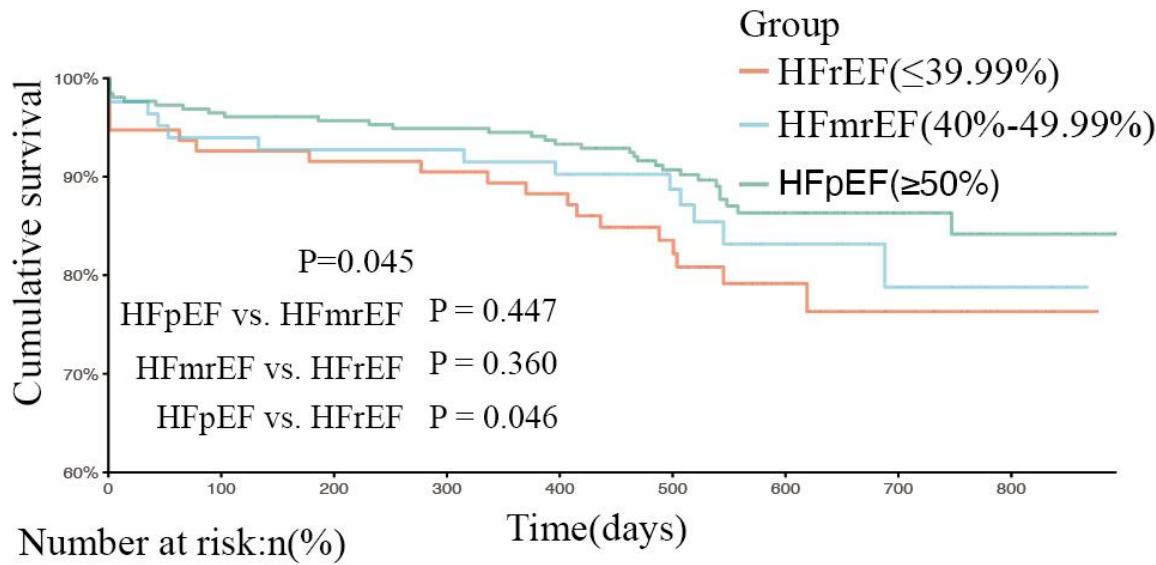


Supplementary Fig 1. KM plots of patients with lower QRS fraction at different ejection fraction levels.



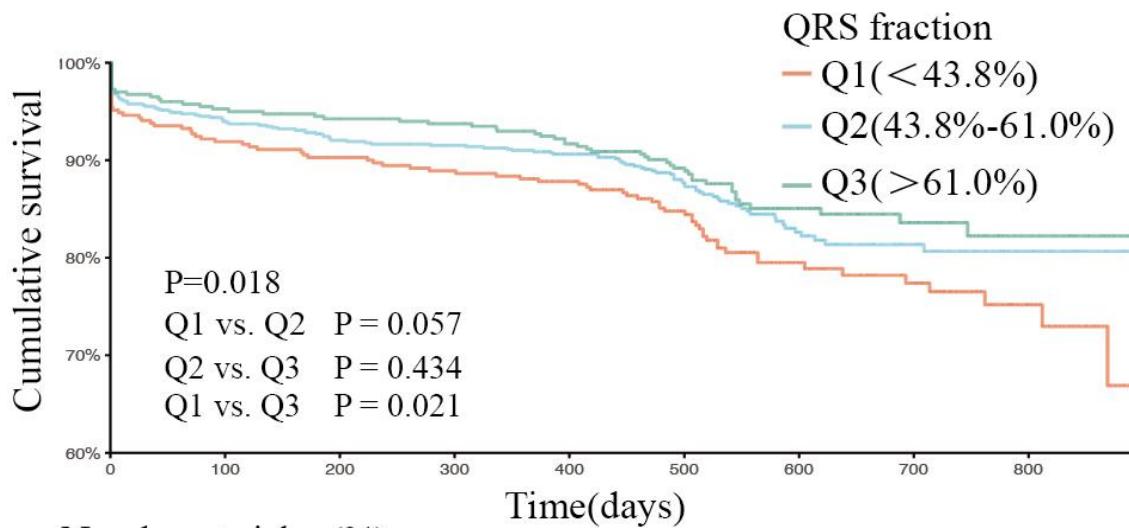
HFrEF	281 (100)	252 (90)	239 (85)	238 (85)	222 (79)	176 (63)	87 (31)	51 (18)	26 (9)
HFmrEF	216 (100)	202 (94)	196 (91)	194 (90)	175 (81)	123 (57)	45 (21)	33 (15)	10 (5)
HFpEF	353 (100)	336 (95)	331 (94)	328 (93)	306 (87)	221 (63)	88 (25)	57 (16)	26 (7)

Supplementary Fig 2. KM plots of patients with middle QRS fraction at different ejection fraction levels.



HFrEF	95 (100)	87 (92)	86 (91)	85 (89)	80 (84)	62 (65)	33 (35)	16 (17)	7 (7)
HFmrEF	83 (100)	77 (93)	76 (92)	75 (90)	72 (87)	58 (70)	29 (35)	17 (20)	5 (6)
HFpEF	256 (100)	246 (96)	243 (95)	239 (93)	232 (91)	190 (74)	104 (41)	55 (21)	24 (9)

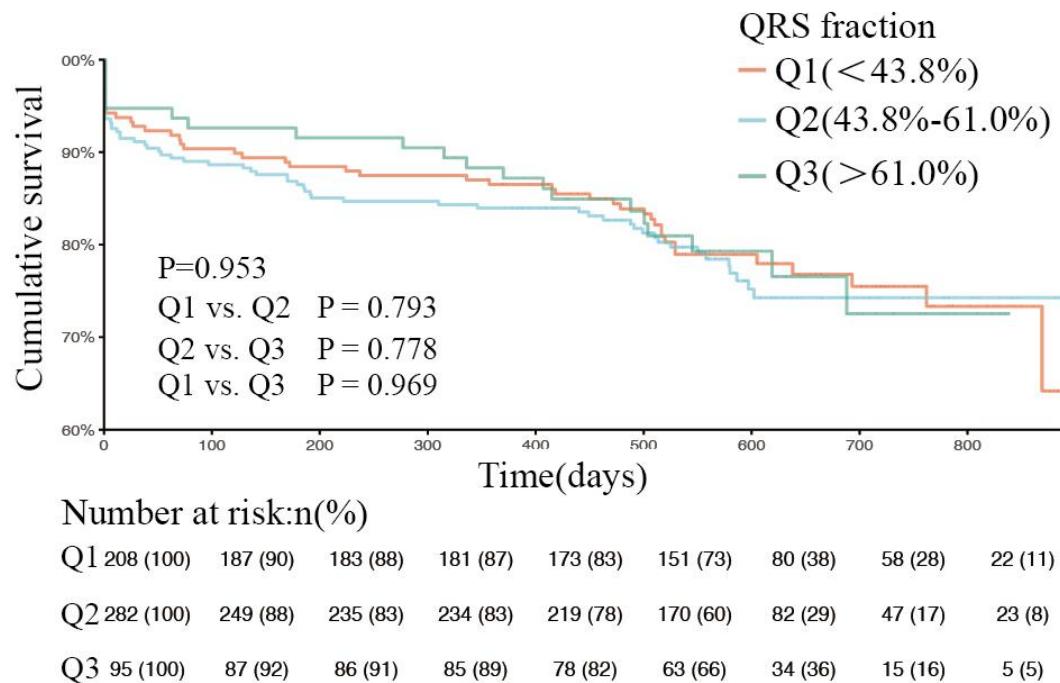
Supplementary Fig 3. KM plots of patients with higher QRS fraction at different ejection fraction levels.



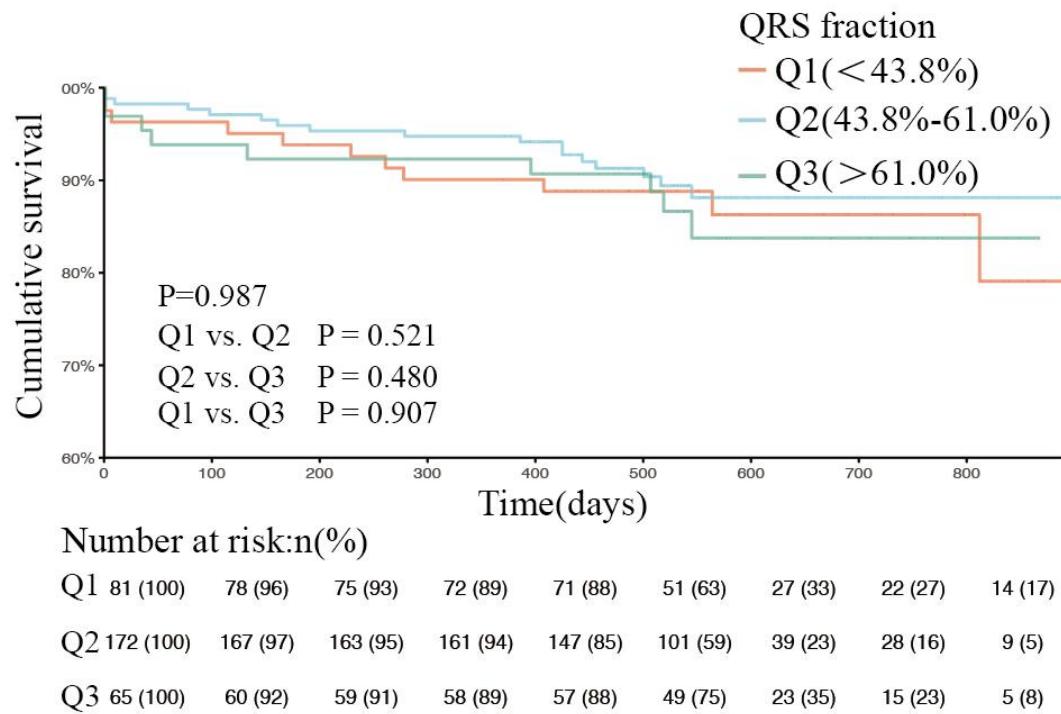
Number at risk:n(%)

Q1	371 (100)	339 (91)	332 (89)	327 (88)	311 (84)	246 (66)	131 (35)	96 (26)	39 (11)
Q2	783 (100)	730 (93)	707 (90)	701 (90)	653 (83)	478 (61)	206 (26)	130 (17)	57 (7)
Q3	401 (100)	379 (95)	374 (93)	369 (92)	354 (88)	293 (73)	160 (40)	84 (21)	34 (8)

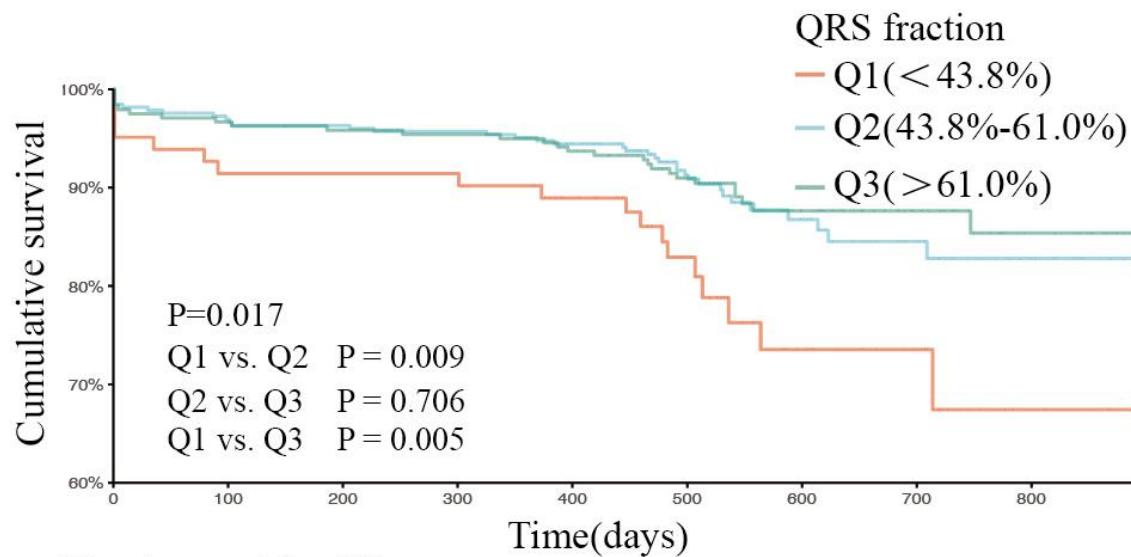
Supplementary Fig 4. KM plots of patients with heart failure at different QRS levels



Supplementary Fig 5. KM plots of patients with reduced ejection fraction at different QRS levels



Supplementary Fig 6. KM plots of patients with mild reduced ejection fraction at different QRS levels



Number at risk:n(%)

Q1	82 (100)	74 (90)	74 (90)	74 (90)	67 (82)	44 (54)	24 (29)	16 (20)	3 (4)
Q2	329 (100)	314 (95)	309 (94)	306 (93)	287 (87)	207 (63)	85 (26)	55 (17)	25 (8)
Q3	241 (100)	232 (96)	229 (95)	226 (94)	219 (91)	181 (75)	103 (43)	54 (22)	24 (10)

Supplementary Fig 7. KM plots of patients with preserved ejection fraction at different QRS levels