

Supplementary Table 1: Inter-observer correlation for diagnosis of QRS-f

	Observer #1	Observer #2	ICC (95% CI)
No QRS-f	304	307	0.82 (0.89-0.88)
Mild QRS-f	43	58	0.70 (0.54-0.86)
Moderate QRS-f	77	71	0.80 (0.69-0.89)
Severe QRS-f	41	39	0.94 (0.92-0.96)
All QRS-f	161	168	0.81 (0.68-0.90)

QRS-f: QRS fragmentation; ICC: interclass correlation coefficient; CI: confidence interval

Note: the numbers in the different cells represent the count of patients for each severity of QRS-f by each of the observers

Supplementary Table 2: Incrementally Adjusted Risk for All-cause Mortality for patients with Cardiac MRI (N=157)

	HR (95% CI)	p
Model 1	2.81 (2.16- 3.66)	<0.001
Model 2	2.61 (2.00 - 3.61)	<0.001
Model 3	1.96 (1.22 - 2.85)	0.022
Model 4	1.71 (1.14 – 2.99)	0.033
Model 5	1.63 (1.06-2.61)	0.048

Model 1: unadjusted all-cause mortality risk based on the extent of QRS-f

Model 2: includes all variables in Model 1 plus adjustment for the following ECG parameters: QRS duration, JT interval and rhythm (sinus, paced rhythm, atrial fibrillation, and atrial flutter/tachycardia).

Model 3: includes all variables in Model 2 plus adjustment for patient demographic characteristics (current age, gender, age at the time of TOF repair and type of TOF repair [transannular patch vs non-transannular patch])

Model 4: includes all variables in Model 3 plus adjustment for history of sustained ventricular tachycardia and/or defibrillator implantation, moderate right ventricular dysfunction by qualitative assessment, and left ventricular ejection fraction <40%.

Model 5: includes all variables in Model 4 plus adjustment for right ventricular end-diastolic volume index > 150 ml/m², right ventricular ejection fraction <40%, and left ventricular ejection fraction <40%.

HR: Hazard ratio; CI: Confidence interval. HR is expressed per incremental risk per class/extent of QRS-f (none, mild, moderate, severe)

Supplementary Table 3: Incrementally Adjusted Risk for All-cause Mortality for patients with Cardiac catheterization data (N=148)

	HR (95% CI)	p
Model 1	2.06 (2.23- 3.69)	<0.001
Model 2	2.43 (1.91 - 3.13)	<0.001
Model 3	2.06 (1.17 – 3.06)	0.037
Model 4	1.87 (1.05 – 2.61)	0.046
Model 5	1.72 (0.98-2.81)	0.055

Model 1: unadjusted all-cause mortality risk based on the extent of QRS-f

Model 2: includes all variables in Model 1 plus adjustment for the following ECG parameters: QRS duration, JT interval and rhythm (sinus, paced rhythm, atrial fibrillation, and atrial flutter/tachycardia).

Model 3: includes all variables in Model 2 plus adjustment for patient demographic characteristics (current age, gender, age at the time of TOF repair and type of TOF repair [transannular patch vs non-transannular patch])

Model 4: includes all variables in Model 3 plus adjustment for history of sustained ventricular tachycardia and/or defibrillator implantation, moderate right ventricular dysfunction by qualitative assessment, and left ventricular ejection fraction <40%.

Model 5: includes all variables in Model 4 plus adjustment for right ventricular end-diastolic pressure >14 mm Hg and left ventricular end-diastolic pressure >16 mm Hg

HR: Hazard ratio; CI: Confidence interval. HR is expressed per incremental risk per class/extent of QRS-f (none, mild, moderate, severe)