

Table S1. Multivariable Analysis of Associations with MACE, reduced LVEF defined as LVEF<50%

Variable	No Ischemia (Ischemic TPD <1%)		Minimal (1 - < 5% ischemic TPD)		Mild (5 - <10% ischemic TPD)	
	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value
Age	1.04 (1.03 – 1.05)	<0.001	1.04 (1.03 – 1.05)	<0.001	1.02 (1.02 – 1.03)	<0.001
Male	1.89 (1.55 – 2.31)	<0.001	--	--	--	--
Body mass index	0.96 (0.94 – 0.98)	<0.001	0.98 (0.97 – 0.99)	0.002	--	--
Hypertension	1.42 (1.12 – 1.80)	0.004	--	--	--	--
Diabetes	1.46 (1.17 – 1.83)	0.001	1.79 (1.54 – 2.09)	<0.001	1.34 (1.12 – 1.60)	0.002
Prior MI	1.49 (1.08 – 2.07)	0.016	1.27 (1.07 – 1.56)	0.008	1.23 (1.01 – 1.49)	0.037
Family History	--	--	0.76 (0.64 – 0.92)	0.004	--	--
Typical Angina	--	--	0.66 (0.46 – 0.95)	0.026	--	--
Exercise Stress	0.43 (0.34 – 0.55)	<0.001	0.54 (0.45 – 0.65)	<0.001	0.53 (0.42 – 0.67)	<0.001
Reduced LVEF	--	--	1.35 (1.10 – 1.65)	0.003	1.50 (1.19 – 1.88)	<0.001
Shape Index	--	--	1.03 (1.02 - 1.04)	<0.001	1.03 (1.02 - 1.04)	<0.001
TID	1.80 (1.23 – 2.63)	0.002	1.22 (0.88 – 1.69)	0.240	1.50 (1.02 – 2.20)	0.039
Post-stress WMA	1.11 (0.77 – 1.61)	0.582	1.22 (1.01 – 1.47)	0.043	0.90 (0.73 – 1.10)	0.307

Table S1: Multivariable models of associations with MACE stratified by extent of ischemia and defining reduced LVEF as resting LVEF<50%. CAD – coronary artery disease, HR – hazard ratio, LVEF – left ventricular ejection fraction, MI – myocardial infarction, TID – transient ischemic dilation, WMA – wall motion abnormality. -- indicates variable not included in model.

Table S2. Univariable Analysis of Associations with MACE

Variable	No Ischemia (TPD <1%)		Minimal (1-<5% ischemic TPD)		Mild (5-<10% ischemic TPD)	
	Unadjusted HR (95% CI)	P-value	Unadjusted HR (95% CI)	P-value	Unadjusted HR (95% CI)	P-value
Age	1.06 (1.05 – 1.06)	< 0.001	1.05 (1.05 – 1.06)	< 0.001	1.03 (1.03 – 1.04)	< 0.001
Male	1.43 (1.17 – 1.74)	< 0.001	0.99 (0.86 – 1.15)	0.926	0.97 (0.80 – 1.19)	0.792
Body mass index	0.96 (0.95 – 0.98)	< 0.001	0.98 (0.97 – 0.99)	0.001	0.98 (0.96 – 0.99)	0.005
Hypertension	1.99 (1.58 – 2.50)	< 0.001	1.63 (1.39 – 1.92)	< 0.001	1.60 (1.30 – 1.98)	< 0.001
Diabetes	1.62 (1.30 – 2.01)	< 0.001	1.90 (1.64 – 2.20)	< 0.001	1.48 (1.23 – 1.76)	< 0.001
Dyslipidemia	1.28 (1.05 – 1.57)	0.017	1.23 (1.06 – 1.44)	0.007	0.96 (0.80 – 1.17)	0.712
Current Smoker	0.92 (0.71 – 1.20)	0.564	0.98 (0.82 – 1.18)	0.834	1.20 (0.97 – 1.48)	0.097
PVD	2.27 (1.75 – 2.96)	< 0.001	1.72 (1.44 – 2.06)	< 0.001	1.73 (1.41 – 2.12)	< 0.001
Prior MI	1.97 (1.43 – 2.72)	< 0.001	1.60 (1.34 – 1.92)	< 0.001	1.47 (1.22 – 1.77)	< 0.001
Prior Revascularization	1.98 (1.56 – 2.50)	< 0.001	1.65 (1.42 – 1.92)	< 0.001	1.29 (1.08 – 1.54)	0.004
Family History of CAD	0.83 (0.67 – 1.03)	0.096	0.61 (0.51 – 0.74)	< 0.001	0.77 (0.62 – 0.95)	0.014
Typical Angina	0.96 (0.63 – 1.48)	0.864	0.67 (0.46 – 0.96)	0.031	1.05 (0.75 – 1.44)	0.802
Exercise Stress	0.34 (0.27 – 0.42)	< 0.001	0.36 (0.30 – 0.43)	< 0.001	0.38 (0.31 – 0.47)	< 0.001
Reduced Resting LVEF	1.66 (0.74 – 3.72)	0.217	2.42 (1.87 – 3.14)	< 0.001	2.57 (2.08 – 3.18)	< 0.001
Resting Defect >10%	2.09 (0.78 – 5.58)	0.144	1.95 (1.42 – 2.67)	< 0.001	1.66 (1.32 – 2.10)	< 0.001
Stress LVEF	0.99 (0.98 – 1.00)	0.155	0.98 (0.97 – 0.98)	< 0.001	0.98 (0.97 – 0.98)	< 0.001
Eccentricity Index	0.04 (0.00 – 0.80)	0.035	0.01 (0.00 – 0.03)	< 0.001	0.00 (0.00 – 0.03)	< 0.001
Shape index	1.01 (0.99 - 1.02)	0.238	1.04 (1.03 - 1.05)	< 0.001	1.05 (1.04 - 1.06)	< 0.001
TID	1.90 (1.30 – 2.78)	0.001	1.21 (0.87 – 1.67)	0.260	1.40 (0.98 – 2.02)	0.080
Post-Stress WMA	1.45 (1.01 – 2.10)	0.046	1.66 (1.38 – 1.99)	< 0.001	1.24 (1.02 – 1.51)	0.035

Table S2: Association between clinical and imaging factors with MACE. Variables associated with MACE in bold (p=< 0.100). CAD – coronary artery disease, CI – confidence interval, HR – hazard ratio, MI – myocardial infarction, LVEF – left ventricular ejection fraction, PVD – peripheral vascular disease, TID – transient ischemic dilation, TPD – total perfusion deficit, WMA – wall motion abnormality.

Table S3. Multivariable Analysis of Associations with all-cause mortality or non-fatal MI

Variable	No Ischemia (Ischemic TPD <1%)		Minimal (1 - < 5% ischemic TPD)		Mild (5 - <10% ischemic TPD)	
	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value
Age	1.05 (1.04 – 1.06)	<0.001	1.04 (1.03 – 1.06)	<0.001	1.03 (1.02 – 1.04)	<0.001
Male	1.85 (1.49 – 2.29)	<0.001	--	--	--	--
Body mass index	0.96 (0.94 – 0.98)	<0.001	0.98 (0.97 – 0.99)	0.005	--	--
Diabetes	1.58 (1.24 – 2.00)	<0.001	1.80 (1.54 – 2.11)	<0.001	1.30 (1.07 – 1.57)	0.007
Family History	--	--	0.78 (0.64 – 0.94)	0.011	--	--
Typical Angina	--	--	0.65 (0.44 – 0.96)	0.029	--	--
Exercise Stress	0.38 (0.29 – 0.87)	<0.001	0.51 (0.42 – 0.61)	<0.001	0.51 (0.40 – 0.50)	<0.001
Reduced LVEF	--	--	1.50 (1.13 – 2.00)	0.006	1.89 (1.46 – 2.44)	<0.001
Shape Index	--	--	1.03 (1.02 - 1.04)	<0.001	1.03 (1.01 - 1.04)	<0.001
TID	1.87 (1.26 – 2.78)	0.002	1.28 (0.92 – 1.80)	0.148	1.50 (1.01 – 2.23)	0.047
Post-stress WMA	1.21 (0.82 – 1.77)	0.334	1.27 (1.04 – 1.55)	0.018	0.99 (0.80 – 1.22)	0.924

Table S3: Multivariable models of associations with all-cause mortality or non-fatal MI, stratified by extent of ischemia. CAD – coronary artery disease, HR – hazard ratio, LVEF – left ventricular ejection fraction, MI – myocardial infarction, TID – transient ischemic dilation, WMA – wall motion abnormality. -- indicates variable not included in model.

Table S4. Multivariable Analysis of Associations with all-cause mortality

Variable	No Ischemia (Ischemic TPD <1%)		Minimal (1- < 5% ischemic TPD)		Mild (5 - <10% ischemic TPD)	
	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value
Age	1.05 (1.04 – 1.06)	<0.001	1.05 (1.04 – 1.06)	<0.001	1.04 (1.03 – 1.05)	<0.001
Male	1.79 (1.43 – 2.25)	<0.001	--	--	--	--
Body mass index	0.96 (0.94 – 0.98)	<0.001	0.98 (0.97 – 0.99)	0.009	--	--
Diabetes	1.65 (1.29 – 2.12)	<0.001	1.87 (1.58 – 2.22)	<0.001	1.35 (1.10 – 1.67)	0.005
Family History	--	--	0.73 (0.59 – 0.91)	0.006	--	--
Typical Angina	--	--	0.55 (0.35 – 0.87)	0.010	--	--
Exercise Stress	0.37 (0.29 – 0.49)	<0.001	0.41 (0.33 – 0.52)	<0.001	0.41 (0.31 – 0.54)	<0.001
Reduced LVEF	--	--	1.57 (1.16 – 2.12)	0.003	1.91 (1.45 – 2.52)	<0.001
Shape Index	--	--	1.03 (1.02 - 1.04)	<0.001	1.03 (1.02 – 1.05)	<0.001
TID	1.71 (1.11 – 2.65)	0.015	1.34 (0.91 – 1.98)	0.135	1.35 (0.81 – 2.23)	0.245
Post-stress WMA	1.70 (1.10 – 2.63)	0.017	1.18 (0.91 – 1.52)	0.209	1.08 (0.83 – 1.39)	0.924

Table S4: Multivariable models of associations with all-cause mortality stratified by extent of ischemia. CAD – coronary artery disease, HR – hazard ratio, LVEF – left ventricular ejection fraction, MI – myocardial infarction, TID – transient ischemic dilation, WMA – wall motion abnormality. -- indicates variable not included in model.

Table S5. Multivariable Analysis of Associations with Non-fatal Events

Variable	No Ischemia (Ischemic TPD <1%)		Minimal (1- < 5% ischemic TPD)		Mild (5 - <10% ischemic TPD)	
	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value	Adjusted HR (95% CI)	P-value
Age	1.04 (1.02 – 1.06)	<0.001	1.02 (1.01 – 1.03)	0.001	1.00 (0.99 – 1.02)	0.607
Male	2.23 (1.48 – 3.36)	<0.001	--	--	--	--
Body mass index	--	--	0.97 (0.94 – 0.99)	0.015	--	--
Diabetes	--	--	1.81 (1.35 – 2.41)	<0.001	--	--
Exercise Stress	0.53 (0.35 – 0.82)	0.004	--	--	0.54 (0.38 – 0.79)	0.001
Shape Index	--	--	--	--	1.03 (1.01 – 1.05)	0.001
TID	1.79 (0.83 – 3.86)	0.141	0.84 (0.39 – 1.78)	0.645	1.63 (0.88 – 3.01)	0.117
Post-stress WMA	0.76 (0.24 – 2.42)	0.647	1.72 (1.16 – 2.55)	0.007	0.96 (0.64 – 1.43)	0.837

Table S5: Multivariable models of associations with non-fatal events stratified by extent of ischemia. Events included non-fatal myocardial infarction (MI) or admission for unstable angina. CAD – coronary artery disease, HR – hazard ratio, LVEF – left ventricular ejection fraction, TID – transient ischemic dilation, WMA – wall motion abnormality. -- indicates variable not included in model.

Figure S1 - Associations with MACE After Excluding Patients with LVEF <50%

Reference Moderate to Severe Ischemia

No High Risk Features

**HR
(95% CI)**

No Ischemia

No High Risk Features 0.35 (0.27 - 0.46)

Transient Ischemic Dilation 0.67 (0.45 - 1.00)

Post-Stress WMA 0.51 (0.32 - 0.80)

Minimal Ischemia

No High Risk Features 0.48 (0.37 - 0.62)

Transient Ischemic Dilation 0.71 (0.46 - 1.11)

Post-Stress WMA 0.72 (0.52 - 0.99)

Mild Ischemia

No High Risk Features 0.81 (0.61 - 1.06)

Transient Ischemic Dilation 1.18 (0.75 - 1.88)

Post-Stress WMA 0.92 (0.64 - 1.30)

0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00

Lower Risk

Unadjusted Hazard Ratio

Higher Risk

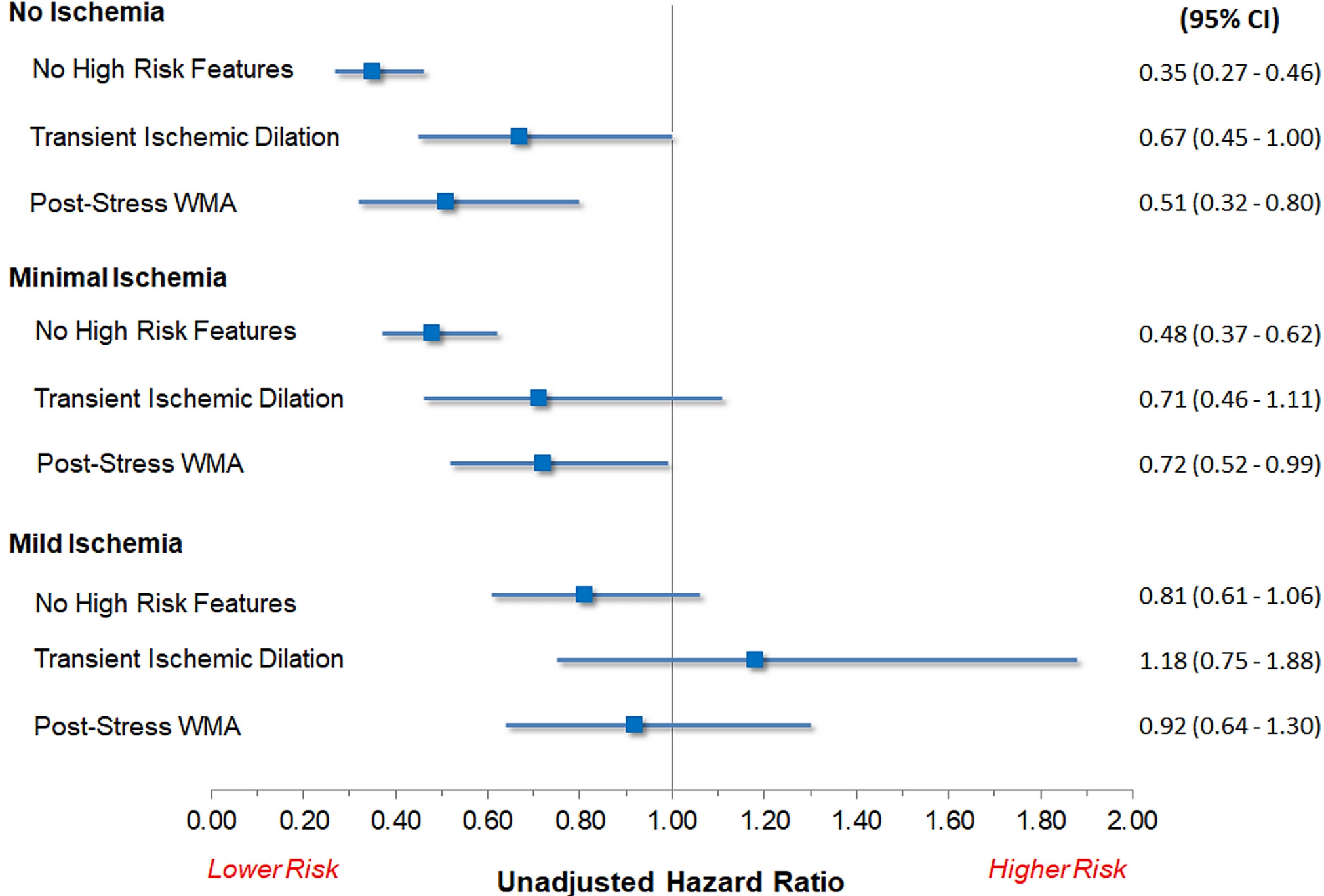


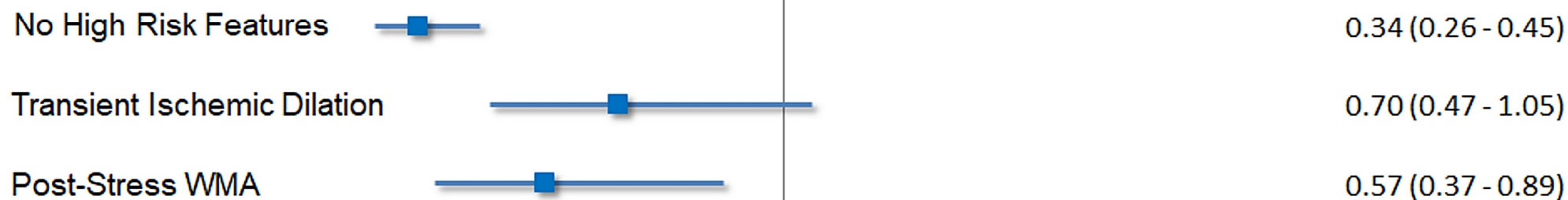
Figure S2 - Associations with All-Cause Mortality or Non-Fatal MI

Reference Moderate to Severe Ischemia

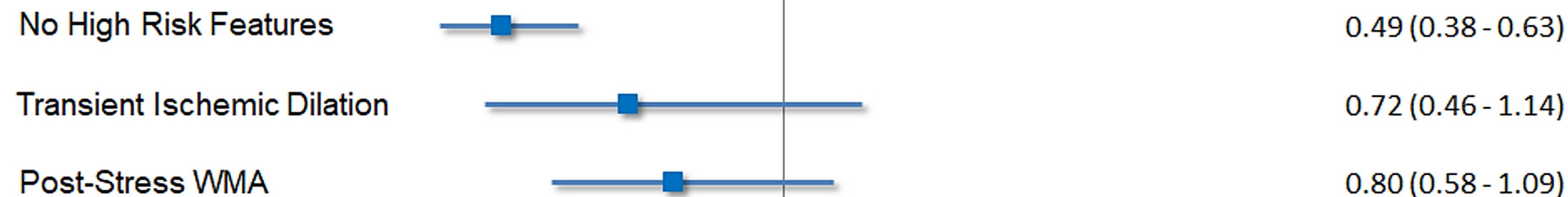
No High Risk Features

**HR
(95% CI)**

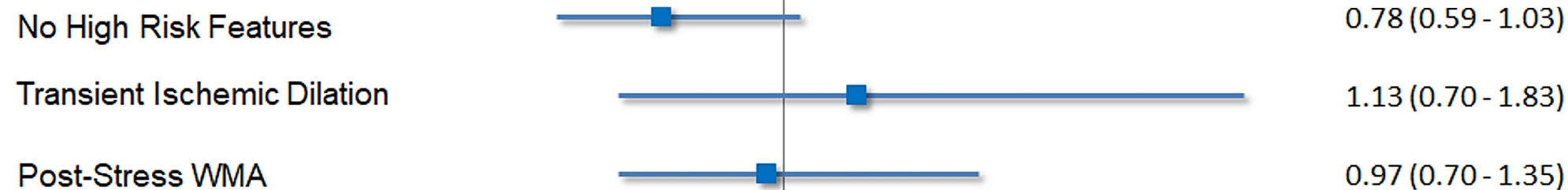
No Ischemia



Minimal Ischemia



Mild Ischemia



0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00

Lower Risk

Unadjusted Hazard Ratio

Higher Risk

Figure S3 - Associations with All-Cause Mortality

Reference Moderate to Severe Ischemia

No High Risk Features

HR
(95% CI)

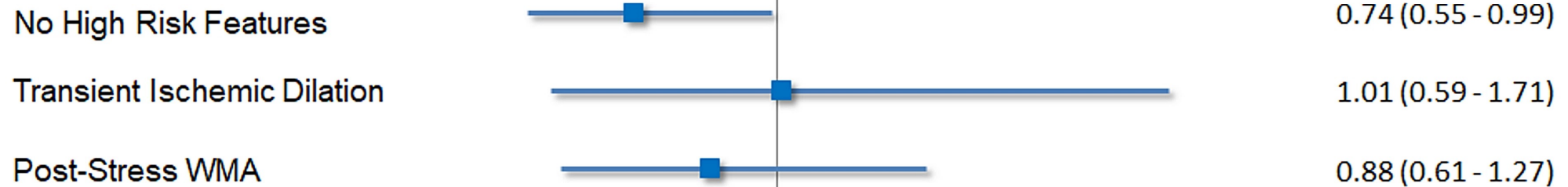
No Ischemia



Minimal Ischemia



Mild Ischemia



0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00

Lower Risk

Unadjusted Hazard Ratio

Higher Risk

Figure S4 - Associations with Non-Fatal MI or Admission for Unstable Angina

