

SUPPLEMENTAL MATERIAL

Supplemental Table 1: Association between body mass index, NP Z-score and risk of primary composite outcome in the study cohort with vs. without participants from Europe.

	Primary study cohort (participants with available BMI & NP levels from Americas only, N = 997)		Cohort combining participants with available BMI & NP levels from Americas & Europe (N = 1,251)	
	HR (95% CI) for Primary composite endpoint[#]	P-value	HR (95% CI) for Primary composite endpoint[#]	P-value
Per 1 SD higher Log NP Z-score	1.28 (1.10 – 1.49)	0.001	1.31 (1.12 – 1.55)	0.001
Per 5-unit higher BMI (below 25 kg/m²) *	0.68 (0.31 – 1.48)	0.33	0.76 (0.29 – 1.95)	0.56
Per 5-unit higher BMI (at or above 25 kg/m²) *	1.15 (1.03 – 1.29)	0.01	1.26 (1.12 -1.42)	<0.0001

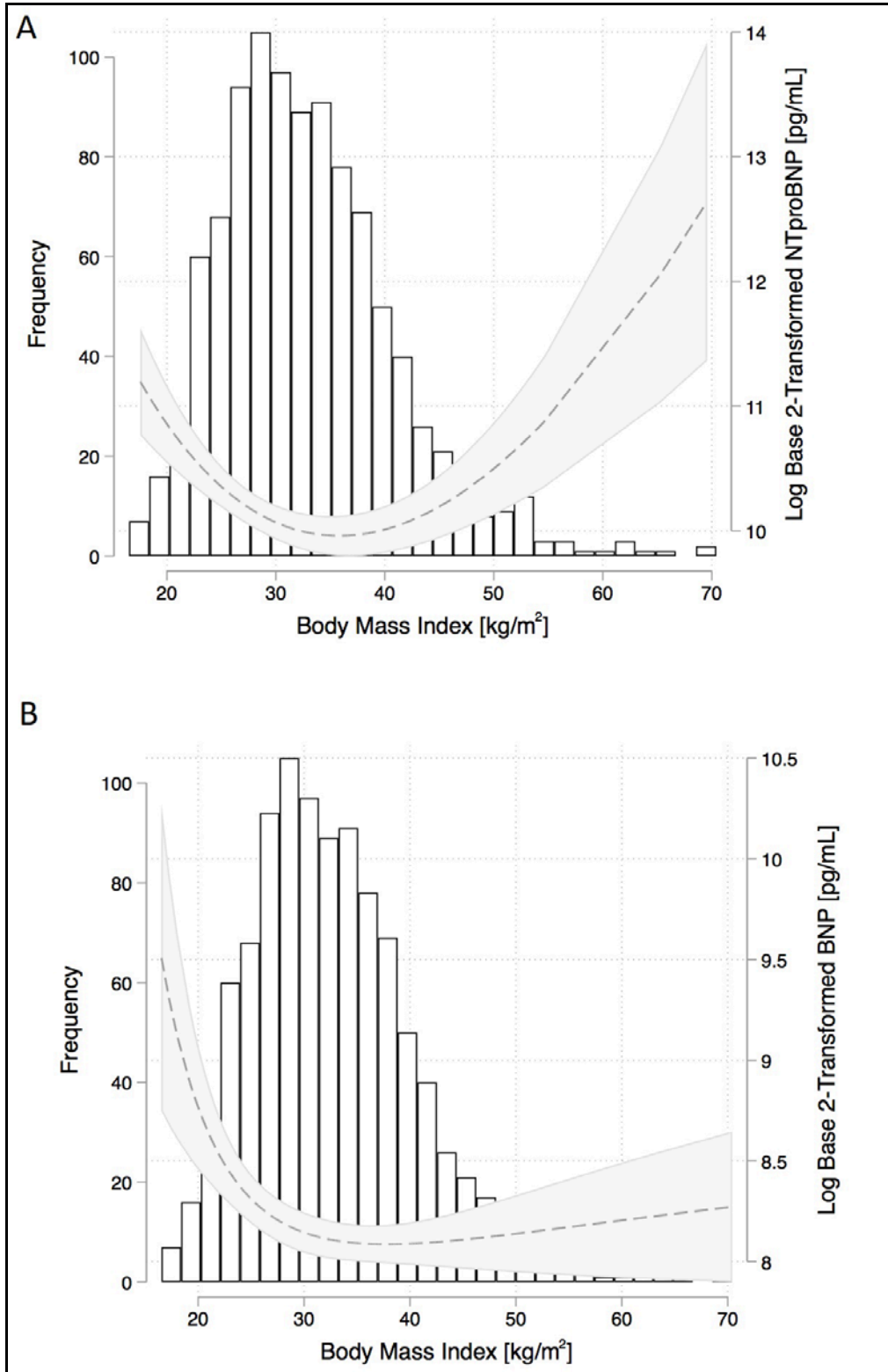
#Model includes age, sex, BUN, systolic BP (linear spline with knot at 140 mm Hg), NYHA class, Sodium level, hx. of atrial fibrillation, hx. of diabetes, BMI (linear spline with knot at 25 kg/m²), and Log NP Z-score.

*Hazard ratio (HR) are reported per 5-unit higher measure of BMI levels above and below the spline knot of 25 kg/m²

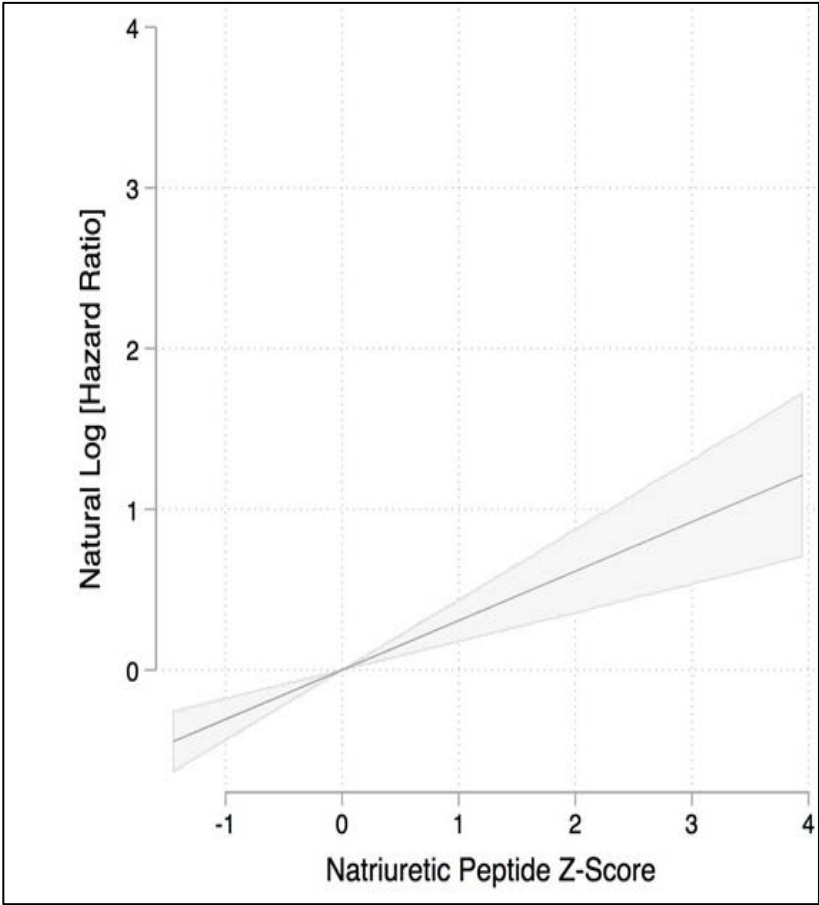
Supplemental Table 2: Association of baseline demographic and risk factors with risk of mortality in the study cohort

	HR (95% CI) for Primary composite endpoint[#]	P-value
Age (Per 1 unit higher)	1.02 (0.96 – 1.05)	0.11
Sex (Female vs. male)	0.60 (0.38 to 0.96)	0.03
Log 2 BUN	1.26 (0.89 – 1.81)	0.19
NYHA class (Per 1 class higher)	1.10 (0.70 – 1.72)	0.67
Sodium level (per 1 unit higher)	1.00 (0.93 – 1.07)	0.95
SBP (per 1 unit higher at levels below 140)	0.97 (0.96 – 0.99)	0.001
SBP (per 1 unit higher at levels above 140)	0.99 (0.93 – 1.05)	0.95
Prevalent atrial fibrillation	0.87 (0.55 – 1.36)	0.54
Prevalent Diabetes	1.35 (0.83 – 2.22)	0.22
[#] Model includes age, sex, BUN, systolic BP (linear spline with knot at 140 mm Hg), NYHA class, Sodium level, hx. of atrial fibrillation, hx. of diabetes, BMI (linear spline with knot at 25 kg/m ²), and Log NP Z-score.		

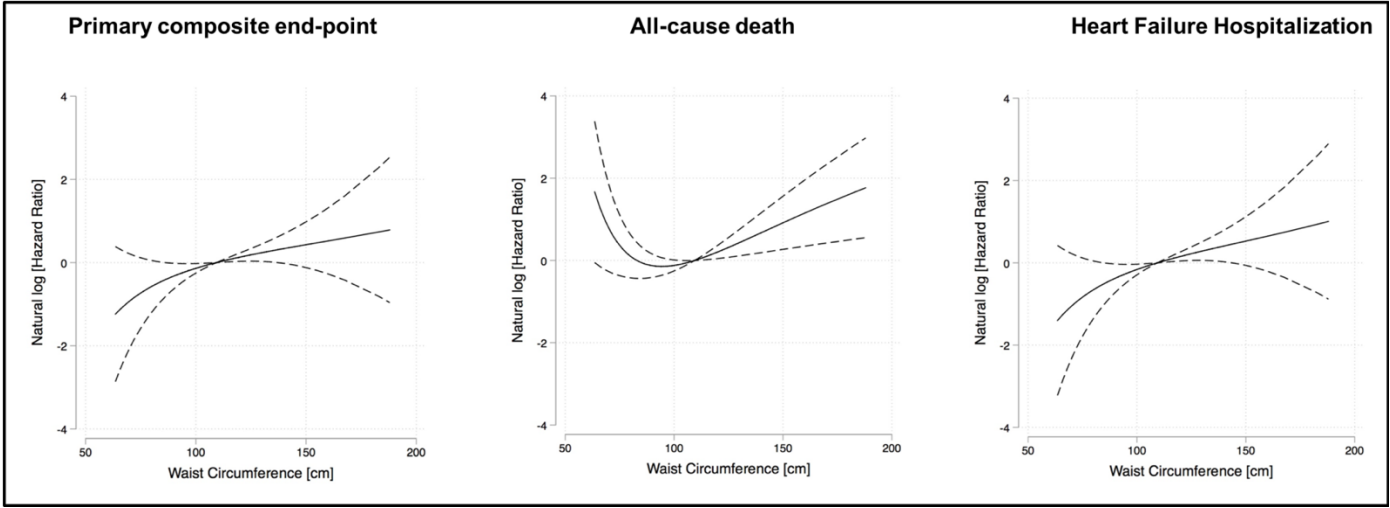
Supplemental Figure 1: Association between BMI and NT-ProBNP (Panel A) and BNP (panel B) levels in the study population



Supplemental Figure 2: Fractional polynomial plot showing continuous association between NP Z-score and risk of primary composite end-point



Supplemental Figure 3: Fractional polynomial plot showing continuous association between waist circumference and risk of primary composite end-point, heart failure hospitalization, and all-cause mortality



Supplemental Figure 4: Kaplan-Meier plot comparing the cumulative incidence of primary composite endpoint across different BMI/NP Z-score based groups. The BMI and NP Z-score based groups are defined here using data derived tertiles-based cut-offs for high and low BMI/NP levels as follows: low BMI low NP [BMI Tertile 1, Median (IQR): 25.6 kg/m² (23.3 to 27.2) & NP Z-score Tertile 1, Median (IQR): -1.04 (-1.22 to -0.81)]; low BMI-high NP [BMI Tertile 1 & NP Z-score Tertile 3 Median (IQR): 1.00 (0.66 to 1.46)]; High BMI-low NP [BMI Tertile 3 Median (IQR): 40.1 kg/m² (37.4 to 44.2)] & NP Z-score Tertile 1]; and high BMI-high NP (BMI & NP Z-score both tertile 3).

