

# Supplementary Materials: Residential Proximity to Major Roadways Is Not Associated with Cardiac Function in African Americans: Results from the Jackson Heart Study

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**Table S1.** Results from linear or logistic regression of residential distance to A1 roads on markers of cardiac function among participants in the Jackson Heart Study ( $n = 4866$ )<sup>a</sup>.

Marker of Cardiac Function	<150 m ( $n = 106$ )	150–299 m ( $n = 159$ )	300–999 m ( $n = 1161$ )	≥1000 m ( $n = 3440$ )	Log-Transformed Distance to Road (Continuous)
	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)
Depressed LVEF, OR (95% CI)	2.39 (0.69, 8.23)	1.47 (0.58, 3.73)	0.49 (0.28, 0.86) *	1.0 (ref)	1.07 (0.90, 1.28)
E-wave velocity (m/s)	−0.04 (−0.1, 0.03)	−0.007 (−0.05, 0.03)	0.0009 (−0.01, 0.02)	0 (ref)	−0.003 (−0.009, 0.004)
Log isovolumic relaxation time	0.02 (−0.06, 0.1)	0.03 (−0.02, 0.08)	−0.006 (−0.02, 0.01)	0 (ref)	0.007 (−0.0005, 0.01)
LA diameter index, mm/m <sup>2</sup>	0.2 (−0.5, 1.0)	−0.1 (−0.6, 0.4)	−0.1 (−0.3, 0.03)	0 (ref)	0.06 (−0.01, 0.1)
Log PASP	0.02 (−0.07, 0.1)	0.04 (−0.02, 0.1)	0.006 (−0.2, 0.03)	0 (ref)	−0.007 (−0.02, 0.003)

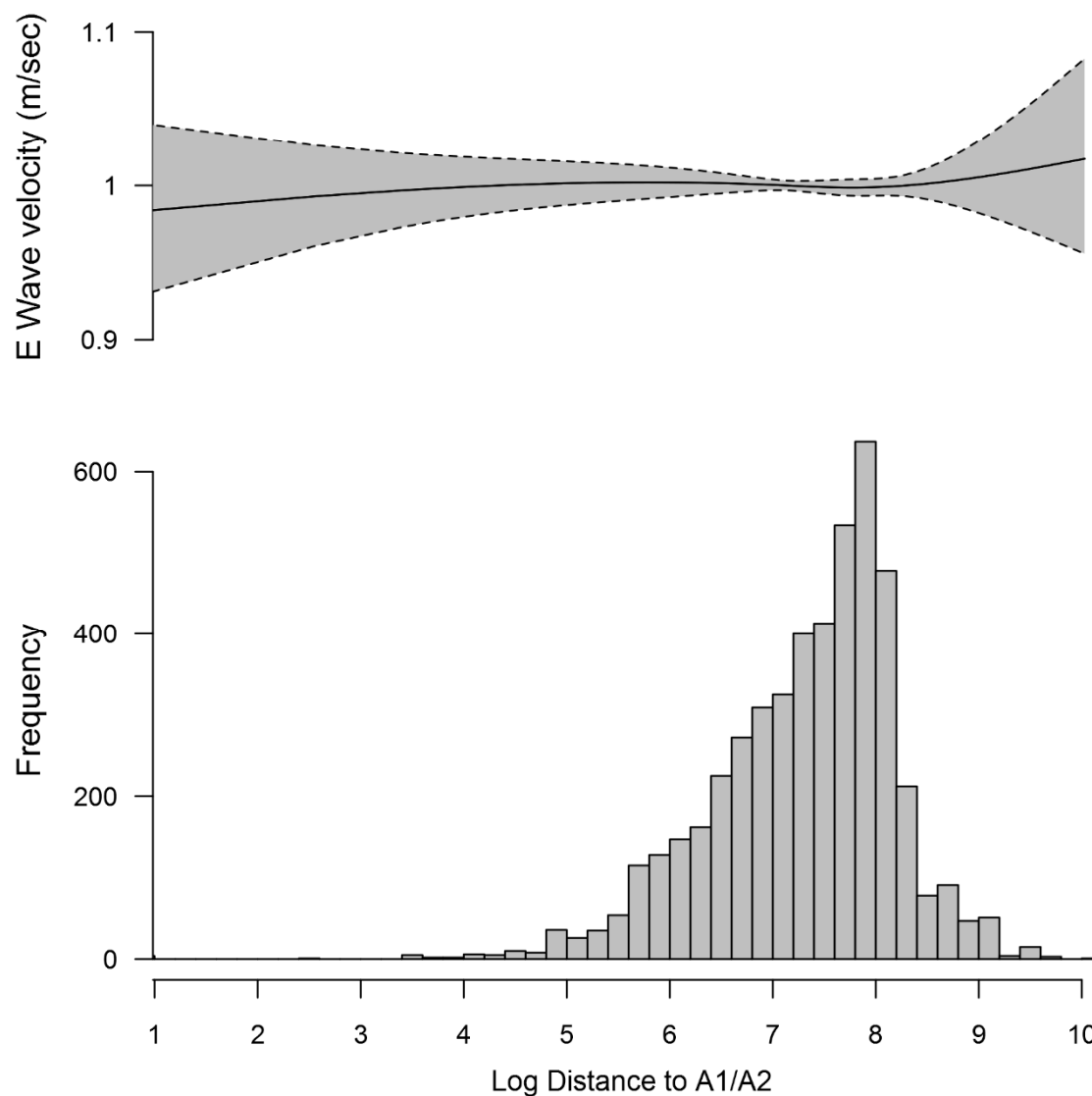
<sup>a</sup> Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status; \*  $p < 0.05$ .

**Table S2.** Results from linear or logistic regression of residential distance to A1 or A2 roads on markers of cardiac function among participants in the Jackson Heart Study, excluding those with CVD ( $n = 4353$ ) <sup>a</sup>.

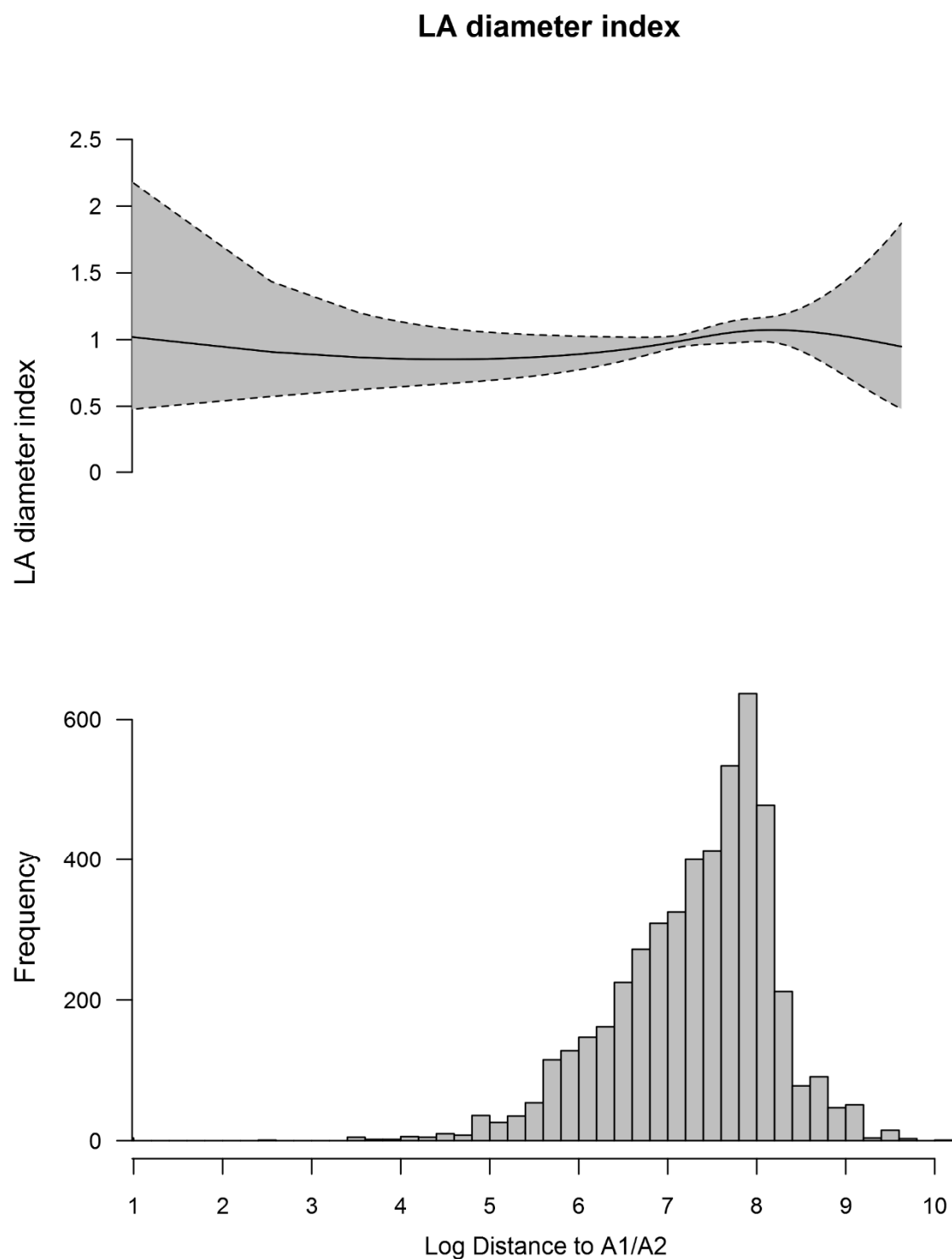
Marker of Cardiac Function	<150 m ( $n = 106$ )	150–299 m ( $n = 159$ )	300–999 m ( $n = 1161$ )	≥1000 m ( $n = 3440$ )	Log-Transformed Distance to Road (Continuous)
	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)	Beta (95% CI) or OR (95% CI)
Depressed LVEF, OR (95% CI)	0.63 (0.15, 2.63)	0.89 (0.32, 2.50)	0.66 (0.41, 1.07)	1.0 (ref)	1.08 (0.90, 1.30)
E-wave velocity (m/s)	−0.004 (−0.04, 0.04)	0.003 (−0.03, 0.04)	0.0007 (−0.01, 0.01)	0 (ref)	0.0005 (−0.005, 0.006)
Log isovolumic relaxation time	0.02 (−0.03, 0.07)	0.02 (−0.02, 0.06)	−0.009 (−0.03, 0.007)	0 (ref)	0.0003 (−0.007, 0.007)
LA diameter index, mm/m <sup>2</sup>	−0.03 (−0.5, 0.4)	−0.4 (−0.8, −0.03)*	−0.2 (−0.3, 0.005)	0 (ref)	0.07 (0.01, 0.1) *
Log PASP	0.002 (−0.06, 0.06)	0.03 (−0.02, 0.08)	0.02 (−0.005, 0.04)	0 (ref)	−0.002 (−0.01, 0.006)

<sup>a</sup> Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status; \*  $p < 0.05$ .

## E Wave velocity

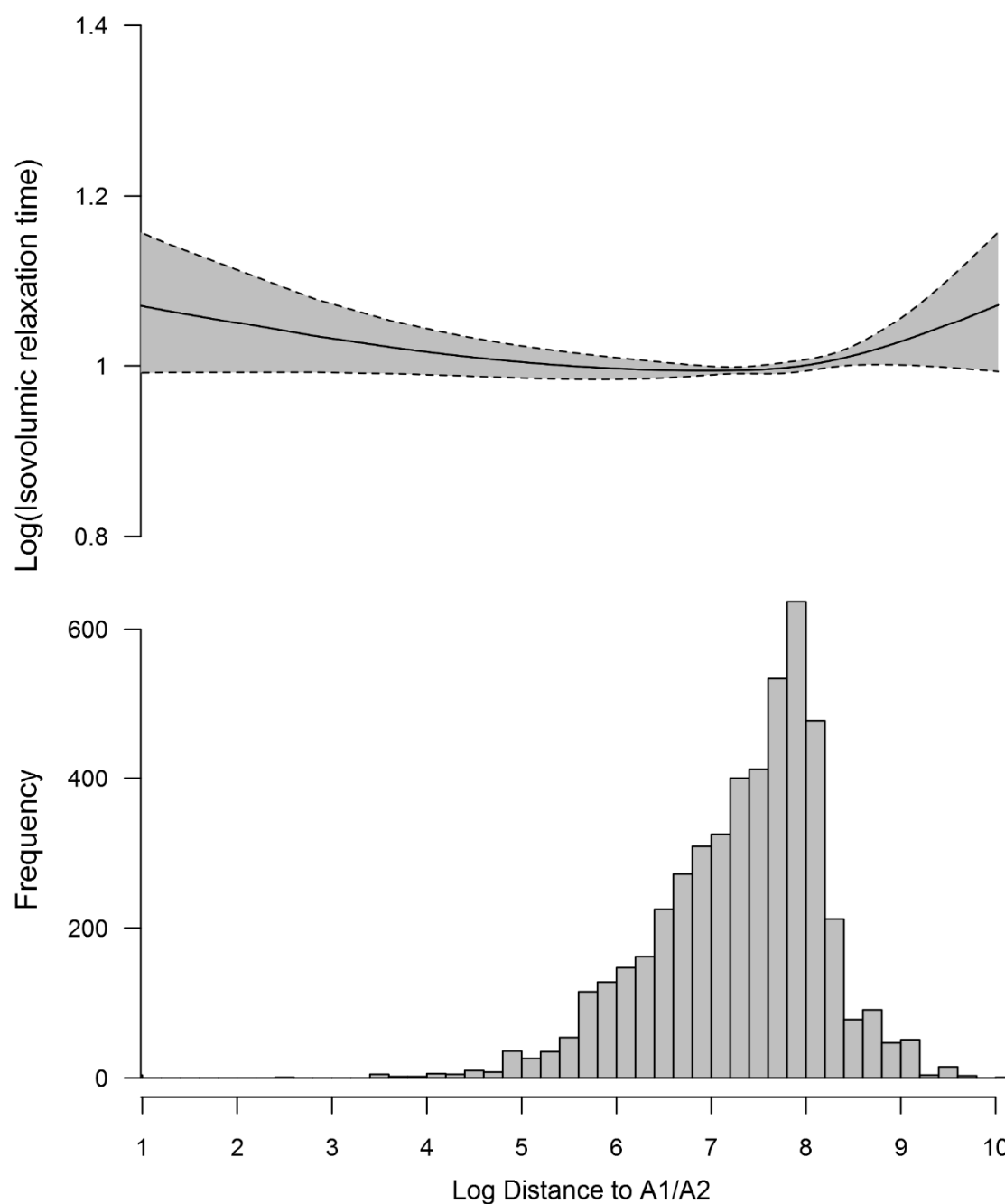


**Figure S1.** Association between E-wave velocity and natural log of residential distance to A1 or A2 roads among participants in the Jackson Heart Study, fitted using a natural spline with 3 degrees of freedom for distance to A1 or A2, adjusting for covariates. Shaded area represents 95% confidence interval. ( $n = 4866$ ) <sup>a</sup>; <sup>a</sup> Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status.



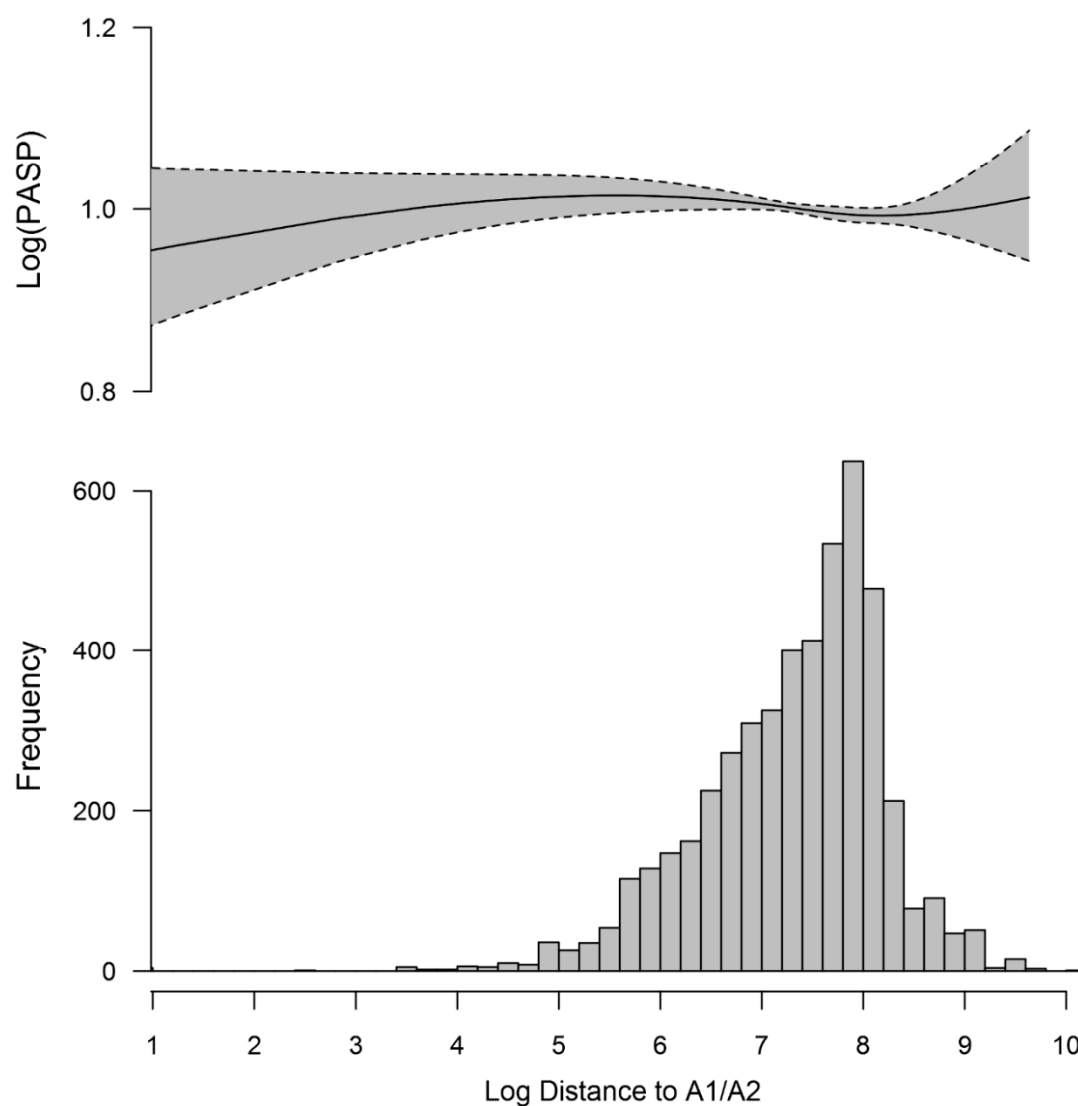
**Figure S2.** Association between LA diameter index and natural log of residential distance to A1 or A2 roads among participants in the Jackson Heart Study, fitted using a natural spline with 3 degrees of freedom for distance to A1 or A2, adjusting for covariates. Shaded are represents 95% confidence interval. ( $n = 4866$ ); \*Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status.

## Isovolumic relaxation time



**Figure S3.** Association between natural log isovolumic relaxation time and natural log of residential distance to A1 or A2 roads among participants in the Jackson Heart Study, fitted using a natural spline with 3 degrees of freedom for distance to A1 or A2, adjusting for covariates. Shaded are represents 95% confidence interval. ( $n = 4866$ ) <sup>a</sup>; <sup>a</sup> Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status.

## Pulmonary Artery Systolic Pressure



**Figure S4.** Association between natural log PASP and natural log of residential distance to A1 or A2 roads among participants in the Jackson Heart Study, fitted using a natural spline with 3 degrees of freedom for distance to A1 or A2, adjusting for covariates. Shaded area represents 95% confidence interval. ( $n = 4866$ )<sup>a</sup>; <sup>a</sup> Adjusted for age, sex, BMI, alcohol consumption, physical activity status, educational level, occupation, smoking status, and neighborhood socioeconomic status.



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