Supplemental Material

Greenness and Depression Incidence among Older Women

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Table S1. Estimated proportion of association between greenness and depression in the Nurses' Health Study explained by physical activity and social engagement[a] (N=38,947 with 3,612 depression cases over 315,548 person-years of follow-up, 2000-2010)

NDVI	Physical Activity			Social Engagement		
250 m buffer	**HR (95% CI) not adjusted for physical activity**	**HR (95% CI) adjusted for physical activity**	**Proportion Mediated**	**HR (95% CI) not adjusted for social engagement**	**HR (95% CI) adjusted for social engagement**	**Proportion Mediated**
Quintile 1[a] (<0.51)	Ref	Ref		Ref	Ref	
Quintile 2 (0.51, 0.65)	0.98 (0.88, 1.09)	0.99 (0.89, 1.10)	<1%	0.98 (0.88, 1.09)	0.98 (0.88, 1.09)	<1%
Quintile 3 (0.65, 0.74)	0.93 (0.84, 1.04)	0.93 (0.84, 1.04)	<1%	0.93 (0.84, 1.04)	0.93 (0.84, 1.04)	<1%
Quintile 4 (0.74, 0.81)	0.95 (0.85, 1.06)	0.95 (0.85, 1.06)	<1%	0.95 (0.85, 1.06)	0.94 (0.85, 1.06)	<1%
Quintile 5 (>0.81)	0.87 (0.78, 0.98)	0.87 (0.78, 0.98)	<1%	0.87 (0.78, 0.98)	0.87 (0.78, 0.98)	<1%
1250 m buffer						
Quintile 1[a] (<0.53)	Ref	Ref		Ref	Ref	
Quintile 2 (0.53, 0.66)	0.92 (0.82, 1.03)	0.92 (0.82, 1.03)	<1%	0.92 (0.83, 1.03)	0.92 (0.82, 1.03)	<1%
Quintile 3 (0.66, 0.73)	1.06 (0.95, 1.18)	1.06 (0.95, 1.18)	<1%	1.06 (0.95, 1.19)	1.06 (0.95, 1.18)	<1%
Quintile 4 (0.73, 0.80)	0.94 (0.85, 1.06)	0.94 (0.85, 1.06)	<1%	0.95 (0.85, 1.06)	0.94 (0.85, 1.05)	<1%
Quintile 5 (>0.80)	0.90 (0.81, 1.01)	0.90 (0.81, 1.01)	<1%	0.90 (0.81, 1.01)	0.90 (0.81, 1.01)	<1%

[a] Least green quintile

[b] Hazard ratios are adjusted for age, race, baseline mental health inventory-5 score, marital status, educational attainment, husband's educational attainment, Census tract population density, Census tract median income, Census tract median home value, $PM_{2.5}$ level, BMI, smoking status and pack-years of smoking, alcohol consumption, physical activity, physical function, bodily pain (baseline), social network strength, care to ill family members (baseline), difficulty sleeping (baseline) except when mediating variable

Figure S1. Stratum-specific hazard ratios (HR) and 95% confidence intervals (CI) for the effect of residential contemporaneous summer greenness (250 m buffer) on incident depression within quintiles of population density in the Nurses' Health Study (N=38,947 with 3,612 cases over 315,548 person-years of follow-up, 2000-2010)
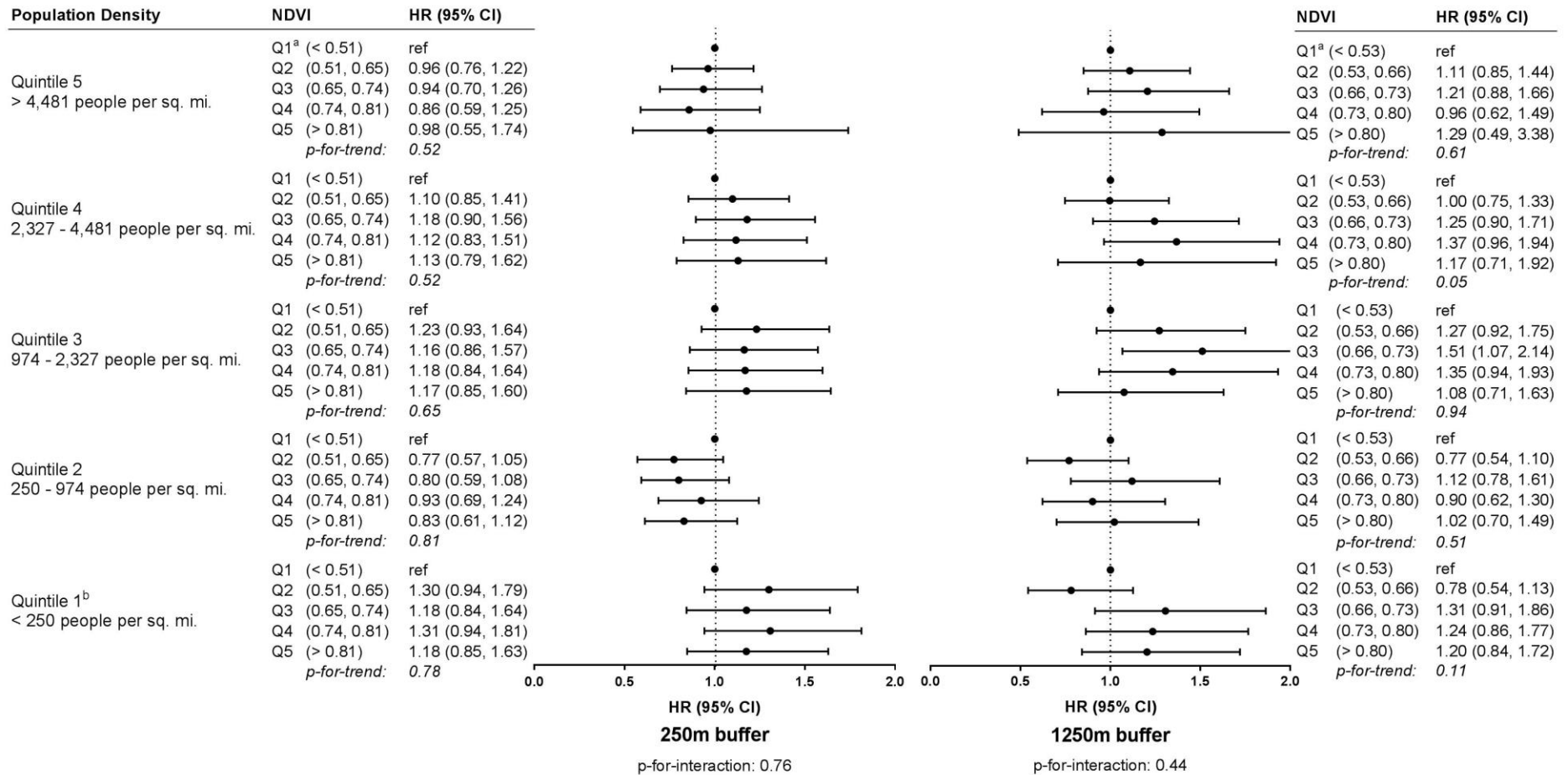

Population Density	NDVI	HR (95% CI)		NDVI	HR (95% CI)
Quintile 5 > 4,481 people per sq. mi.	Q1[a] (< 0.51)	ref		Q1[a] (< 0.53)	ref
	Q2 (0.51, 0.65)	0.96 (0.76, 1.22)		Q2 (0.53, 0.66)	1.11 (0.85, 1.44)
	Q3 (0.65, 0.74)	0.94 (0.70, 1.26)		Q3 (0.66, 0.73)	1.21 (0.88, 1.66)
	Q4 (0.74, 0.81)	0.86 (0.59, 1.25)		Q4 (0.73, 0.80)	0.96 (0.62, 1.49)
	Q5 (> 0.81)	0.98 (0.55, 1.74)		Q5 (> 0.80)	1.29 (0.49, 3.38)
	p-for-trend:	0.52		p-for-trend:	0.61
Quintile 4 2,327 - 4,481 people per sq. mi.	Q1 (< 0.51)	ref		Q1 (< 0.53)	ref
	Q2 (0.51, 0.65)	1.10 (0.85, 1.41)		Q2 (0.53, 0.66)	1.00 (0.75, 1.33)
	Q3 (0.65, 0.74)	1.18 (0.90, 1.56)		Q3 (0.66, 0.73)	1.25 (0.90, 1.71)
	Q4 (0.74, 0.81)	1.12 (0.83, 1.51)		Q4 (0.73, 0.80)	1.37 (0.96, 1.94)
	Q5 (> 0.81)	1.13 (0.79, 1.62)		Q5 (> 0.80)	1.17 (0.71, 1.92)
	p-for-trend:	0.52		p-for-trend:	0.05
Quintile 3 974 - 2,327 people per sq. mi.	Q1 (< 0.51)	ref		Q1 (< 0.53)	ref
	Q2 (0.51, 0.65)	1.23 (0.93, 1.64)		Q2 (0.53, 0.66)	1.27 (0.92, 1.75)
	Q3 (0.65, 0.74)	1.16 (0.86, 1.57)		Q3 (0.66, 0.73)	1.51 (1.07, 2.14)
	Q4 (0.74, 0.81)	1.18 (0.84, 1.64)		Q4 (0.73, 0.80)	1.35 (0.94, 1.93)
	Q5 (> 0.81)	1.17 (0.85, 1.60)		Q5 (> 0.80)	1.08 (0.71, 1.63)
	p-for-trend:	0.65		p-for-trend:	0.94
Quintile 2 250 - 974 people per sq. mi.	Q1 (< 0.51)	ref		Q1 (< 0.53)	ref
	Q2 (0.51, 0.65)	0.77 (0.57, 1.05)		Q2 (0.53, 0.66)	0.77 (0.54, 1.10)
	Q3 (0.65, 0.74)	0.80 (0.59, 1.08)		Q3 (0.66, 0.73)	1.12 (0.78, 1.61)
	Q4 (0.74, 0.81)	0.93 (0.69, 1.24)		Q4 (0.73, 0.80)	0.90 (0.62, 1.30)
	Q5 (> 0.81)	0.83 (0.61, 1.12)		Q5 (> 0.80)	1.02 (0.70, 1.49)
	p-for-trend:	0.81		p-for-trend:	0.51
Quintile 1[b] < 250 people per sq. mi.	Q1 (< 0.51)	ref		Q1 (< 0.53)	ref
	Q2 (0.51, 0.65)	1.30 (0.94, 1.79)		Q2 (0.53, 0.66)	0.78 (0.54, 1.13)
	Q3 (0.65, 0.74)	1.18 (0.84, 1.64)		Q3 (0.66, 0.73)	1.31 (0.91, 1.86)
	Q4 (0.74, 0.81)	1.31 (0.94, 1.81)		Q4 (0.73, 0.80)	1.24 (0.86, 1.77)
	Q5 (> 0.81)	1.18 (0.85, 1.63)		Q5 (> 0.80)	1.20 (0.84, 1.72)
	p-for-trend:	0.78		p-for-trend:	0.11

HR (95% CI)
250m buffer
p-for-interaction: 0.76

HR (95% CI)
1250m buffer
p-for-interaction: 0.44

[a] Least green quintile

[b] Least dense quintile

Hazard ratios are adjusted for age, race, BMI, smoking status and pack-years of smoking, alcohol consumption, physical activity, physical function, bodily pain (baseline), marital status, social network strength, care to ill family members (baseline), difficulty sleeping (baseline), baseline mental health, educational attainment, husband's educational attainment, Census tract median income, Census tract median home value, $PM_{2.5}$ level