

Supplementary Table 2. Factors associated with UPDRS-III scores and advanced Hoehn-and-Yahr stages in CADASIL patients with parkinsonism (n=55)

	UPDRS-III score		Hoehn-Yahr stage ≥3	
	Beta* (95% CI)	P	OR* (95% CI)	P
Log α-synuclein (pg/mL)	5.27 (-2.21 to 12.75)	0.16	1.61 (0.28 to 10.60)	0.60
Cortical thickness (mm)	-5.48 (-9.98 to -0.99)	0.02	0.30 (0.07 to 1.00)	0.049
WMH volume (mL)	0.13 (-0.03 to 0.29)	0.12	1.05 (1.00 to 1.11)	0.06
Fazekas scale				
Periventricular	-0.55 (-7.06 to 5.97)	0.87	1.59 (0.33 to 9.13)	0.58
Subcortical	1.48 (-4.78 to 7.74)	0.64	4.97 (0.72 to 107.50)	0.12
Total	0.30 (-3.20 to 3.80)	0.86	1.90 (0.71 to 6.91)	0.23
Basal ganglia dilated PVS	-4.03 (-8.57 to 0.50)	0.08	1.02 (0.38 to 2.68)	0.97
Lacune number	0.20 (-0.41 to 0.81)	0.51	1.08 (0.95 to 1.25)	0.23
Any BG lacune	0.10 (-7.37 to 7.57)	0.98	1.67 (0.32 to 8.62)	0.54
BG lacune number	0.47 (-1.94 to 2.87)	0.70	1.27 (0.78 to 2.09)	0.34
CMB number	0.04 (-0.02 to 0.11)	0.18	1.01 (0.99 to 1.02)	0.41
Any BG CMB	2.48 (-4.56 to 9.52)	0.48	2.70 (0.50 to 14.59)	0.25
BG CMB number	0.32 (-0.35 to 0.99)	0.34	1.08 (0.95 to 1.24)	0.24

UPDRS-III, Unified Parkinson's Disease Rating Scale part III; OR, odds ratio; CADASIL, cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy; CI, confidence interval; WMH, white matter hyperintensity; PVS, perivascular space; CMB, cerebral microbleeds; BG, basal ganglia. *Age- and sex-adjusted.

Supplementary Table 3. Effects of plasma α-synuclein on motor severity in patients with CADASIL or idiopathic Parkinson's disease

	CADASIL with parkinsonism (n=55)		Idiopathic Parkinson's disease (n=158)	
	Beta* (95% CI)	P	Beta* (95% CI)	P
UPDRS-III score	5.27 (-2.21 to 12.75)	0.16	2.13 (0.83 to 3.43)	<0.01
H-Y stage ≥3	OR* (95% CI)	P	OR* (95% CI)	P
Log α-synuclein	1.61 (0.28 to 10.60)	0.60	1.57 (1.12 to 2.21)	0.01

CADASIL, cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy; UPDRS-III, Unified Parkinson's Disease Rating Scale part III; OR, odds ratio; CI, confidence interval; H-Y, Hoehn-Yahr. *Age and sex adjusted.