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3 **Supplemental Files**  
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6 **Supplemental File 1.**  
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8 Table of country-specific allele frequencies and association results.  
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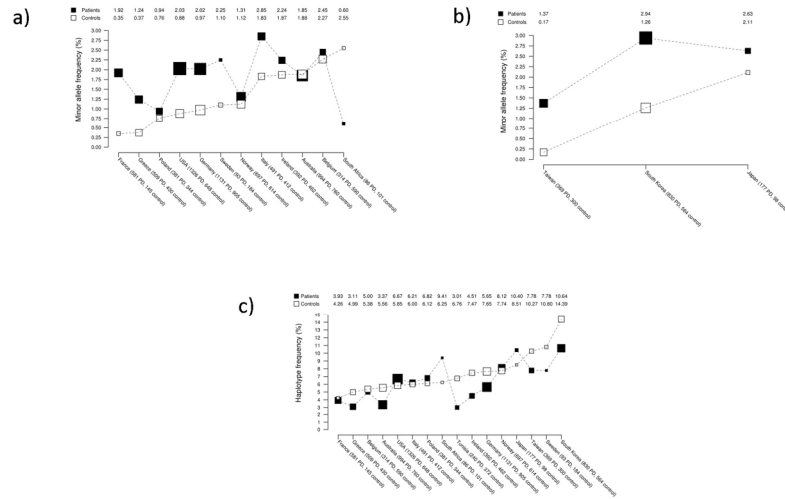
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13 **Supplemental File 2.**  
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15 Consortia list of GEO-PD member sites.  
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20 **Supplemental File 3.**  
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22 GEO-PD member site acknowledgements.  
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Figure 1. Population-specific allele frequencies



215x166mm (300 x 300 DPI)

**Supplemental Table 1a: Country-specific minor allele frequencies and results of association analysis for p.M1646T in Caucasians**

Country	Sample size		Minor allele frequency (95% CI), %		Test of association <sup>a</sup>	
	Patients with PD	Controls	Patients with PD	Controls	OR (95% CI)	P-value
France	581	145	1.92 (1.19 - 2.92)	0.35 (0.01 - 1.93)	5.68 (0.76 – 42.58)	0.091
Greece	509	430	1.24 (0.64 - 2.16)	0.37 (0.08 - 1.08)	2.50 (0.69 – 9.11)	0.16
Poland	381	344	0.94 (0.38 - 1.93)	0.76 (0.25 - 1.76)	1.25 (0.39 – 3.98)	0.71
USA	1326	648	2.03 (1.52 - 2.65)	0.88 (0.44 - 1.57)	2.06 (1.04 – 4.07)	0.038
Germany	1131	905	2.02 (1.47 - 2.70)	0.97 (0.57 - 1.55)	2.13 (1.20 – 3.78)	0.009
Sweden	93	184	2.25 (0.62 - 5.65)	1.10 (0.30 - 2.79)	2.09 (0.51 – 8.58)	0.30
Norway	697	614	1.31 (0.76 - 2.09)	1.12 (0.60 - 1.92)	1.17 (0.56 – 2.42)	0.68
Italy	491	412	2.85 (1.89 - 4.12)	1.83 (1.03 – 3.00)	1.43 (0.74 – 2.76)	0.28
Ireland	392	462	2.24 (1.31 - 3.57)	1.87 (1.09 - 2.98)	1.21 (0.61 – 2.40)	0.59
Australia	994	760	1.85 (1.30 - 2.55)	1.88 (1.25 - 2.70)	0.98 (0.60 – 1.63)	0.95
Belgium	314	590	2.45 (1.38 - 4.01)	2.27 (1.30 - 3.66)	1.08 (0.53 – 2.23)	0.83
South Africa	86	101	0.60 (0.02 - 3.31)	2.55 (0.83 - 5.85)	0.23 (0.03 – 1.98)	0.18
Overall	6995	5595	1.88 (1.66 - 2.12)	1.30 (1.09 - 1.54)	1.43 (1.15 – 1.78)	0.0012

OR=odds ratio. CI=confidence interval. PD=Parkinson's disease. <sup>a</sup>ORs, 95% CIs, and p-values result from fixed effects logistic regression models with adjustment for GEO-PD site for countries with more than one site and in the overall model; country-specific ORs and 95% CIs, but not country-specific p-values, were reported in our initial study<sup>4</sup>.

**Supplemental Table 1b: Country-specific minor allele frequencies and results of association analysis for p.A419V in Asians**

Country	Sample size		Minor allele frequency (95% CI), %		Test of association <sup>a</sup>	
	Patients with PD	Controls	Patients with PD	Controls	OR (95% CI)	
Taiwan	369	300	1.37 (0.66 - 2.50)	0.17 (0.00 - 0.93)	7.51 (0.95 – 59.60)	0.057
South Korea	830	564	2.94 (2.18 - 3.88)	1.26 (0.69 - 2.11)	2.21 (1.20 – 4.06)	0.011
Japan	177	98	2.63 (1.21 - 4.94)	2.11 (0.58 - 5.30)	1.26 (0.38 – 4.22)	0.70
Overall	1376	962	2.48 (1.93 - 3.14)	1.00 (0.61 - 1.56)	1.73 (1.20 – 2.49)	0.0011

OR=odds ratio. CI=confidence interval. PD=Parkinson's disease. <sup>a</sup>ORs, 95% CIs, and p-values result from fixed effects logistic regression models with adjustment for GEO-PD site for countries with more than one site and in the overall model; country-specific ORs and 95% CIs, but not country-specific p-values, were reported in our initial study<sup>4</sup>.

**Supplemental Table 1c: Country-specific frequency and results of association analysis for the p.N551K-R1398H-K1423K haplotype**

Country	Sample size		Haplotype frequency (95% CI), %		Test of association <sup>a</sup>	
	Patients with PD	Controls	Patients with PD	Controls	OR (95% CI)	P-value
France	581	145	3.93 (2.48 – 5.89)	4.26 (1.58 – 9.03)	0.92 (0.37 – 2.31)	0.86
Greece	509	430	3.11 (1.75 – 5.07)	4.99 (2.68 – 7.00)	0.70 (0.35 – 1.42)	0.33
Belgium	314	590	5.00 (2.83 – 8.11)	5.38 (3.57 – 7.73)	0.93 (0.48 – 1.77)	0.82
Australia	994	760	3.37 (2.32 – 4.72)	5.56 (4.02 – 7.47)	0.59 (0.37 – 0.95)	0.030
USA	1326	648	6.67 (5.34 – 8.21)	5.85 (4.16 – 7.98)	1.16 (0.76 – 1.77)	0.48
Italy	491	412	6.21 (4.20 – 8.80)	6.00 (3.88 – 8.80)	1.03 (0.59 – 1.80)	0.92
Poland	381	344	6.82 (4.51 – 9.84)	6.12 (3.83 – 9.21)	1.12 (0.62 – 2.04)	0.70
South Africa	86	101	9.41 (4.15 – 17.71)	6.25 (2.33 – 13.11)	1.56 (0.52 – 4.69)	0.43
Tunisia	240	372	3.01 (0.99 – 6.89)	6.76 (4.38 – 9.89)	0.42 (0.16 – 1.14)	0.091
Ireland	392	462	4.51 (2.65 – 7.12)	7.47 (5.23 – 10.29)	0.58 (0.32 – 1.06)	0.079
Germany	1131	905	5.65 (4.36 – 7.19)	7.65 (5.96 – 9.63)	0.71 (0.50 – 1.02)	0.064
Norway	697	614	8.12 (6.18 – 10.44)	7.74 (5.73 – 10.19)	1.05 (0.70 – 1.58)	0.80
Japan	177	98	10.40 (6.28 – 15.94)	8.51 (3.75 – 16.08)	1.25 (0.52 – 2.99)	0.62
Taiwan	369	300	7.78 (5.23 – 11.04)	10.27 (7.04 – 14.34)	0.74 (0.43 – 1.26)	0.27
Sweden	93	184	7.78 (3.18 – 15.37)	10.80 (6.63 – 16.34)	0.70 (0.28 – 1.73)	0.44
South Korea	830	564	10.64 (8.60 – 12.98)	14.39 (11.54 – 17.63)	0.72 (0.52 – 1.00)	0.048
Overall	8611	6929	6.18 (5.67 – 6.72)	7.90 (7.24 – 8.60)	0.82 (0.72 – 0.94)	0.0043

OR=odds ratio. CI=confidence interval. PD=Parkinson's disease. <sup>a</sup>ORs, 95% CIs, and p-values result from fixed effects logistic regression models with adjustment for GEO-PD site for countries with more than one site and in the overall model; country-specific ORs and 95% CIs, but not country-specific p-values, were reported in our initial study<sup>4</sup>.