

Online Table 1: Results of the hierarchical linear regression analyses for the prediction of EDSS^a

Age- and Sex-Adjusted z Scores	Model		Predictor		
	R ² (ΔR^2)	F	B (bootstrap 95% CI)	T	P (Bootstrap P)
DGM structures					
Normalized volume					
Thalamus	0.102 (0.070)	3.304	-0.341 (-0.591 to -0.129)	-2.613	.01 (.02)
Caudate	0.056 (0.025)	1.735	-0.202 (-0.472 to -0.268)	-1.507	.14 (.25)
Globus pallidus	0.067 (0.035)	2.093	-0.205 (-0.427 to -0.260)	-1.819	.07 (.14)
Iron concentration					
Thalamus ^b	0.121 (0.089)	3.975	-0.379 (-0.639 to -0.113)	-2.963	.004 (.005)
	0.177 (0.074)	4.615	-0.349 (-0.594 to -0.082)	-2.789	.007 (.01)
Iron content					
Thalamus ^b	0.113 (0.081)	3.681	-0.406 (-0.700 to -0.099)	-2.815	.006 (.009)
	0.172 (0.070)	4.466	-0.379 (-0.664 to -0.056)	-2.691	.009 (.01)
Eigenvariates					
Modulated iron maps					
Left Caudate (MS > HC) ^b	0.062 (0.030)	1.916	0.169 (-0.087 to -0.384)	1.672	.10 (.17)
	0.090 (0.036)	2.131	0.185 (-0.083 to -0.406)	1.835	.07 (.13)
Right thalamus (MS < HC) ^b	0.066 (0.034)	2.050	-0.303 (-0.650 to -0.019)	-1.785	.08 (.08)
	0.137 (0.032)	3.405	-0.295 (-0.617 to -0.015)	-1.796	.08 (.07)
Left thalamus (MS < HC) ^b	0.091 (0.060)	2.920	-0.429 (-0.765 to -0.122)	-2.390	.02 (.009)
	0.149 (0.055)	3.751	-0.411 (-0.713 to -0.135)	-2.352	.02 (.02)
Modulated myelin maps					
Right thalamus (MS < HC) ^b	0.156 (0.124)	5.344	-0.575 (-0.947 to -0.177)	-3.571	.001 (.001)
	0.189 (0.085)	5.012	-0.493 (-0.839 to -0.075)	-2.997	.004 (.007)
Left thalamus (MS < HC) ^b	0.115 (0.083)	3.772	-0.333 (-0.615 to -0.036)	-2.861	.005 (.01)
	0.148 (0.054)	3.740	-0.278 (-0.542 to -0.010)	-2.343	.02 (.04) ^c
Thalamic subnuclei					
Normalized volume					
Pulvinar	0.088 (0.056)	2.809	-0.310 (-0.573 to -0.016)	-2.322	.02 (.03)
Iron content					
Pulvinar ^b	0.114 (0.082)	3.725	-0.415 (-0.687 to -0.148)	-2.837	.006 (.003)
	0.116 (0.027)	2.810	-0.350 (-0.753 to -0.153)	-1.628	.11 (.11)
Myelin content					
Pulvinar ^b	0.113 (0.082)	3.708	-0.415 (-0.790 to -0.029)	-2.828	.006 (.02)
	0.127 (0.039)	3.140	-0.324 (-0.697 to -0.222)	-1.964	.05 (.08)

^a All the models include T2-LL and age- and sex-adjusted z scores of normalized brain volume in the first block ($F = 1.447$, $R^2 = 0.032$, $P = .24$; Predictors: T2-LL, $B = 1.4E-5$, $T = 1243$, $P = .22$; normalized brain volume, $B = -0.050$, $T = -0.466$, $P = .64$) and age- and sex-adjusted z scores of individual MRI features in the second step.

^b Results refer to models without (upper row) and with (lower row) the inclusion of the corresponding DGM structure volume in the first block.

^c Not significant after FDR-correction.