Table S1. Association of neuropathologies with cognitive level and change

Neuropathologic Indicator	Global Cognition		Cognitive Change	
	Estimate (SE)	95% CI	Estimate (SE)	95% CI
Amyloid	-0.03 (0.01)	(-0.04,-0.02)	-0.001 (0.001)	(-0.003,-0.0008)
Tau Tangles	-0.06 (0.001)	(-0.07,-0.05)	-0.004 (0.0002)	(-0.005,-0.004)
Gross Infarcts	-0.27 (0.05)	(-0.37,-0.16)	-0.01 (0.005)	(-0.02,-0.004)
Microinfarcts	-0.10 0.05)	(-0.21,0.01)	0.004 (0.005)	(-0.006,0.01)
Cerebral Amyloid Angiopathy	-0.08 (0.05)	(-0.19,0.02)	-0.005 (0.005)	(-0.01,0.004)
Atherosclerosis	-0.17 (0.06)	(-0.28,-0.06)	-0.01 (0.005)	(-0.02,-0.006)
Arteriolosclerosis	-0.09 (0.06)	(-0.20,0.01)	-0.01 (0.005)	(-0.02,-0.0008)
Lewy bodies, neocortical	-0.53 (0.07)	(-0.67,-0.39)	-0.04 (0.01)	(-0.05,-0.03)
TDP-43	-0.09 (0.02)	(-0.14,-0.05)	-0.004 (0.002)	(-0.007,0.0003)
Hippocampal Sclerosis	-0.70 (0.09)	(-0.87,-0.52)	-0.04 (0.01)	(-0.05,-0.02)

Note. Adjusted for time between last cognitive assessment and death

Table S2. Associations of pathology type and personality trait

Neuroticism

	Estimate	Std Err	LCL	UCL
Amyloid	0.014	0.007	0.001	0.028
Tau tangles	0.009	0.003	0.003	0.016
Gross infarcts	-0.031	0.058	-0.145	0.082
Microinfarcts	-0.021	0.060	-0.139	0.098
Cerebral amyloid angiopathy	-0.024	0.058	-0.138	0.089
Atherosclerosis	0.067	0.060	-0.050	0.185
Arteriolosclerosis	0.002	0.060	-0.116	0.121
Lewy bodies, neocortical	0.058	0.079	-0.098	0.214
TDP-43	0.024	0.027	-0.021	0.068
Hippocampal sclerosis	0.093	0.094	-0.095	0.277

Extraversion

	Estimate	Std Err	LCL	UCL
Amyloid	0.011	0.007	-0.002	0.025
Tau tangles	0.007	0.003	0.001	0.014
Gross infarcts	-0.094	0.057	-0.207	0.019
Microinfarcts	-0.052	0.090	-0.140	0.066
Cerebral amyloid angiopathy	-0.006	0.057	-0.119	0.106
Atherosclerosis	-0.086	0.059	-0.202	0.029
Arteriolosclerosis	-0.021	0.059	-0.137	0.095
Lewy bodies, neocortical	0.082	0.080	-0.074	0.238
TDP-43	0.035	0.022	-0.009	0.079
Hippocampal sclerosis	-0.014	0.093	-0.196	0.169

Conscientiousness

	Estimate	Std Err	LCL	UCL
Amyloid	-0.329	0.008	-0.049	-0.017
Tau tangles	-0.004	0.004	-0.011	0.003
Gross infarcts	0.039	0.067	-0.091	0.170
Microinfarcts	0.075	0.069	-0.060	0.210
Cerebral amyloid angiopathy	-0.005	0.066	-0.135	0.124
Atherosclerosis	0.036	0.070	-0.101	0.173
Arteriolosclerosis	0.045	0.070	-0.092	0.183
Lewy bodies, neocortical	-0.188	0.091	-0.367	-0.010
TDP-43	0.003	0.026	-0.048	0.054
Hippocampal sclerosis	-0.032	0.110	-0.248	0.184

Openness

	Estimate	Std Err	LCL	UCL
Amyloid	0.018	0.011	-0.009	0.033
Tau tangles	0.003	0.005	-0.006	0.012

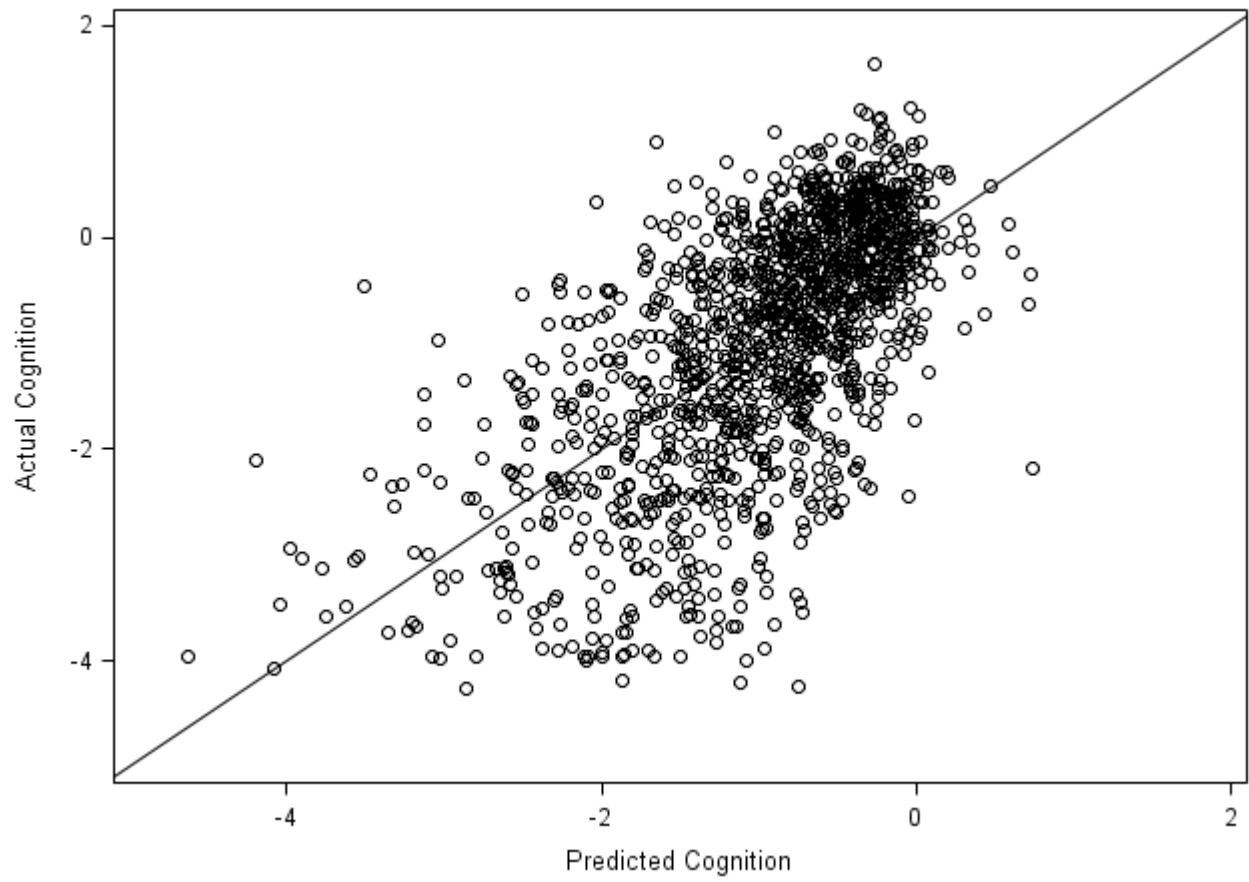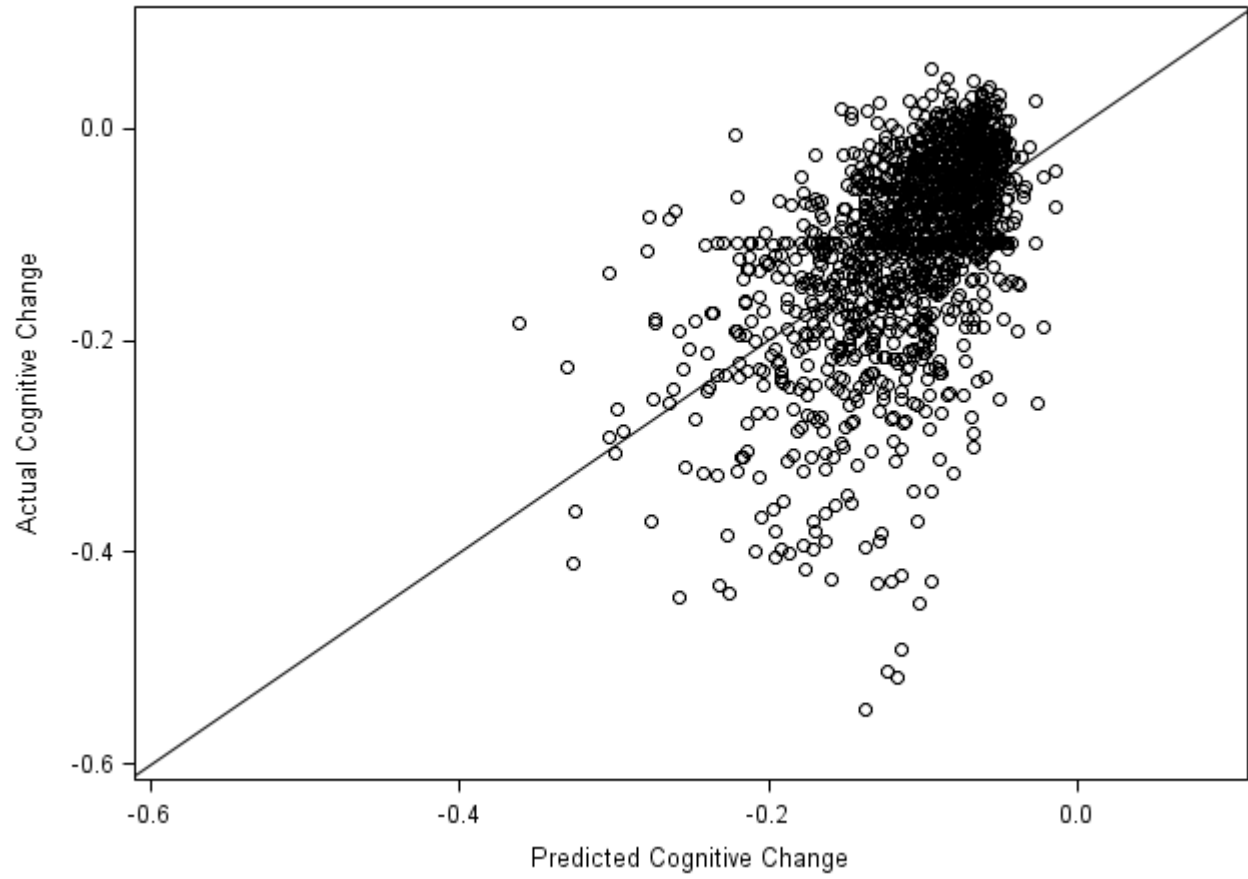|	Estimate	Std Err	LCL	UCL
Gross infarcts	-0.049	0.081	-0.209	0.110
Microinfarcts	-0.166	0.084	-0.331	-0.001
Cerebral amyloid angiopathy	0.005	0.079	-0.151	0.161
Atherosclerosis	-0.134	0.080	-0.292	0.023
Arteriolosclerosis	-0.155	0.084	-0.319	0.009
Lewy bodies, neocortical	0.295	0.112	0.074	0.516
TDP-43	-0.035	0.032	-0.098	0.027
Hippocampal sclerosis	-0.158	0.135	-0.423	0.107
Agreeableness				
	Estimate	**Std Err**	**LCL**	**UCL**
Amyloid	0.006	0.011	-0.015	0.027
Tau tangles	0.006	0.004	-0.004	0.014
Gross infarcts	-0.009	0.082	-0.170	0.151
Microinfarcts	0.057	0.085	-0.109	0.224
Cerebral amyloid angiopathy	0.071	0.080	-0.086	0.228
Atherosclerosis	-0.170	0.080	-0.327	-0.012
Arteriolosclerosis	0.070	0.084	-0.095	0.234
Lewy bodies, neocortical	0.020	0.114	-0.204	0.245
TDP-43	-0.003	0.032	-0.066	0.060
Hippocampal sclerosis	-0.026	0.136	-0.293	0.241

Figure S1. Predicted vs. Actual Cognition

Figure S2. Actual vs. Predicted Cognitive Change.