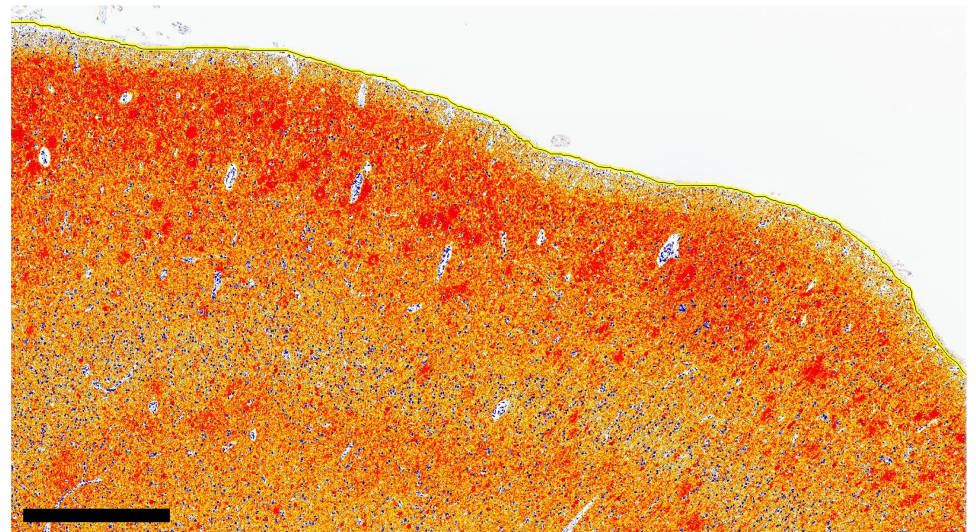
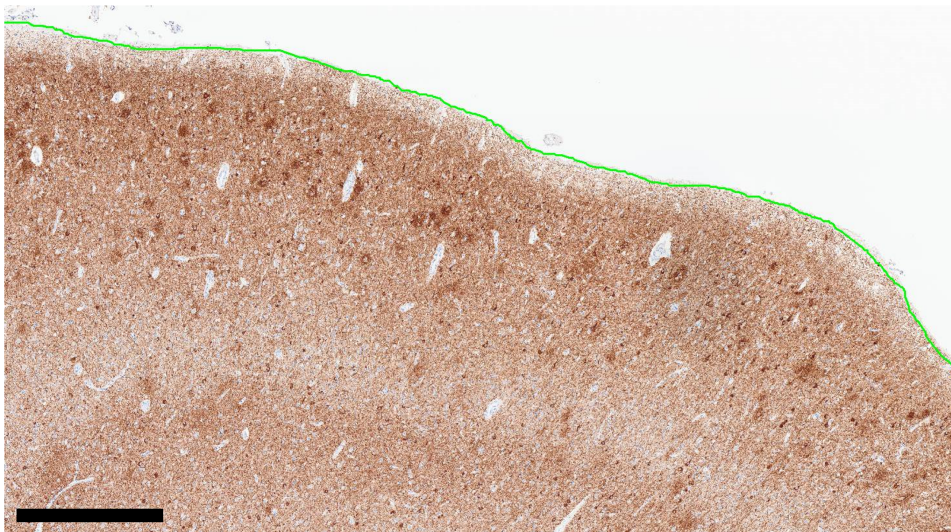
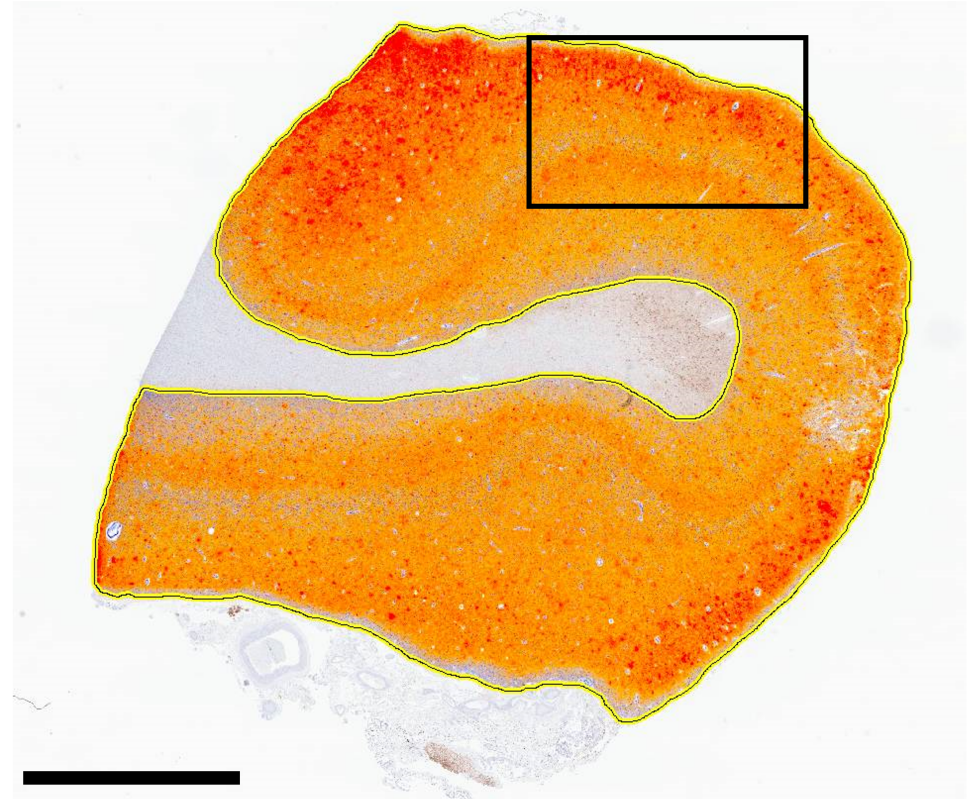
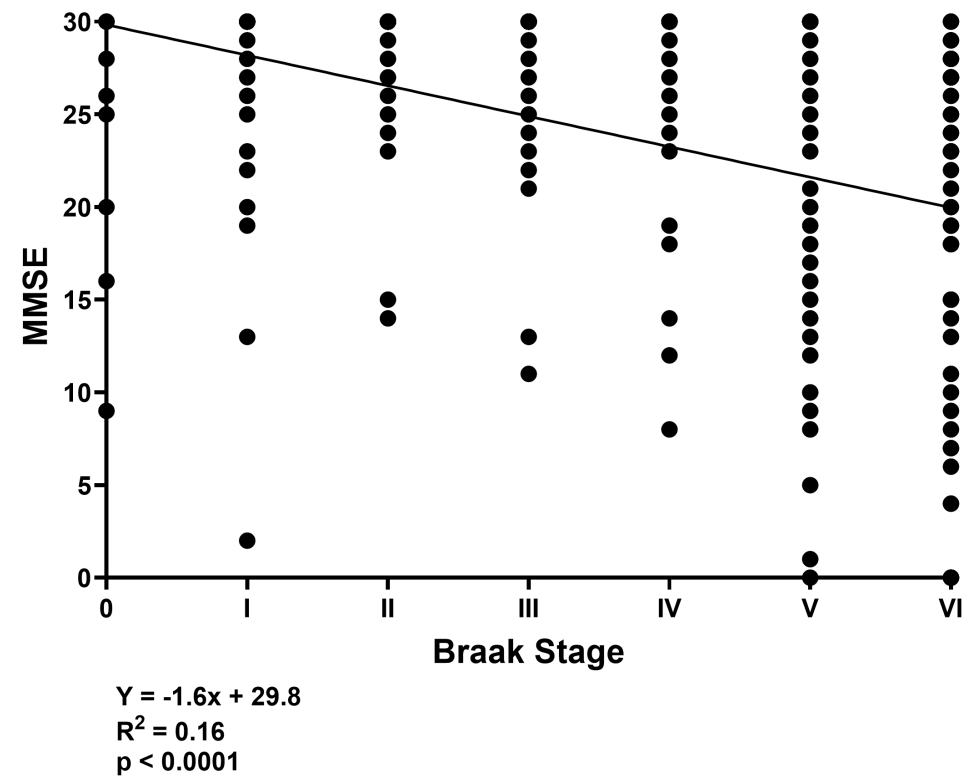
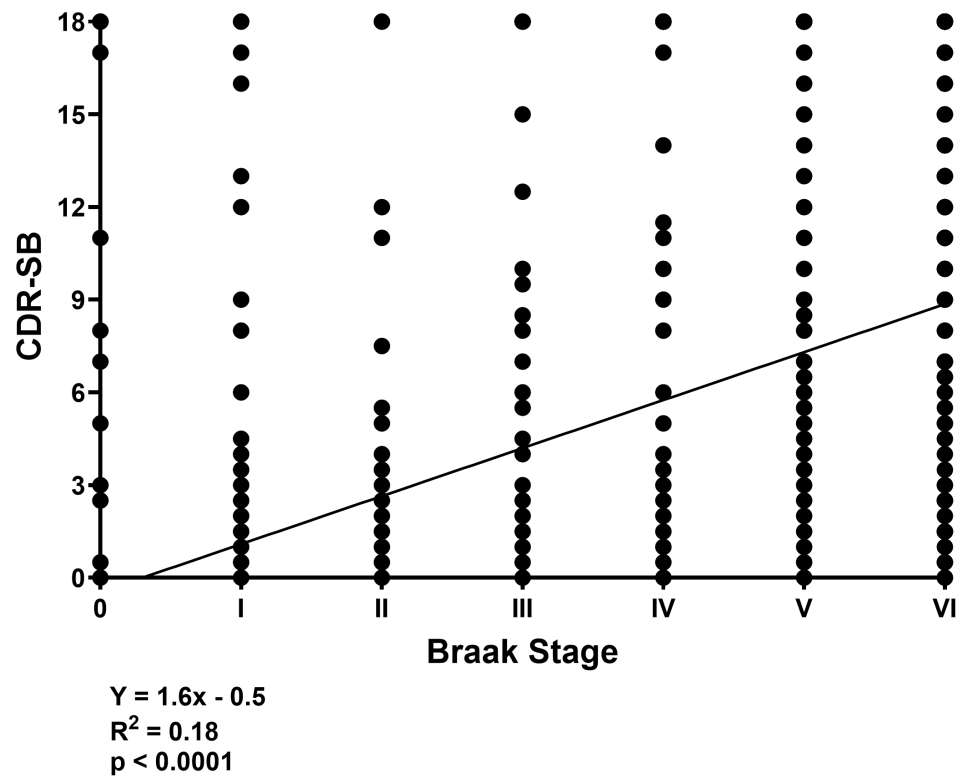
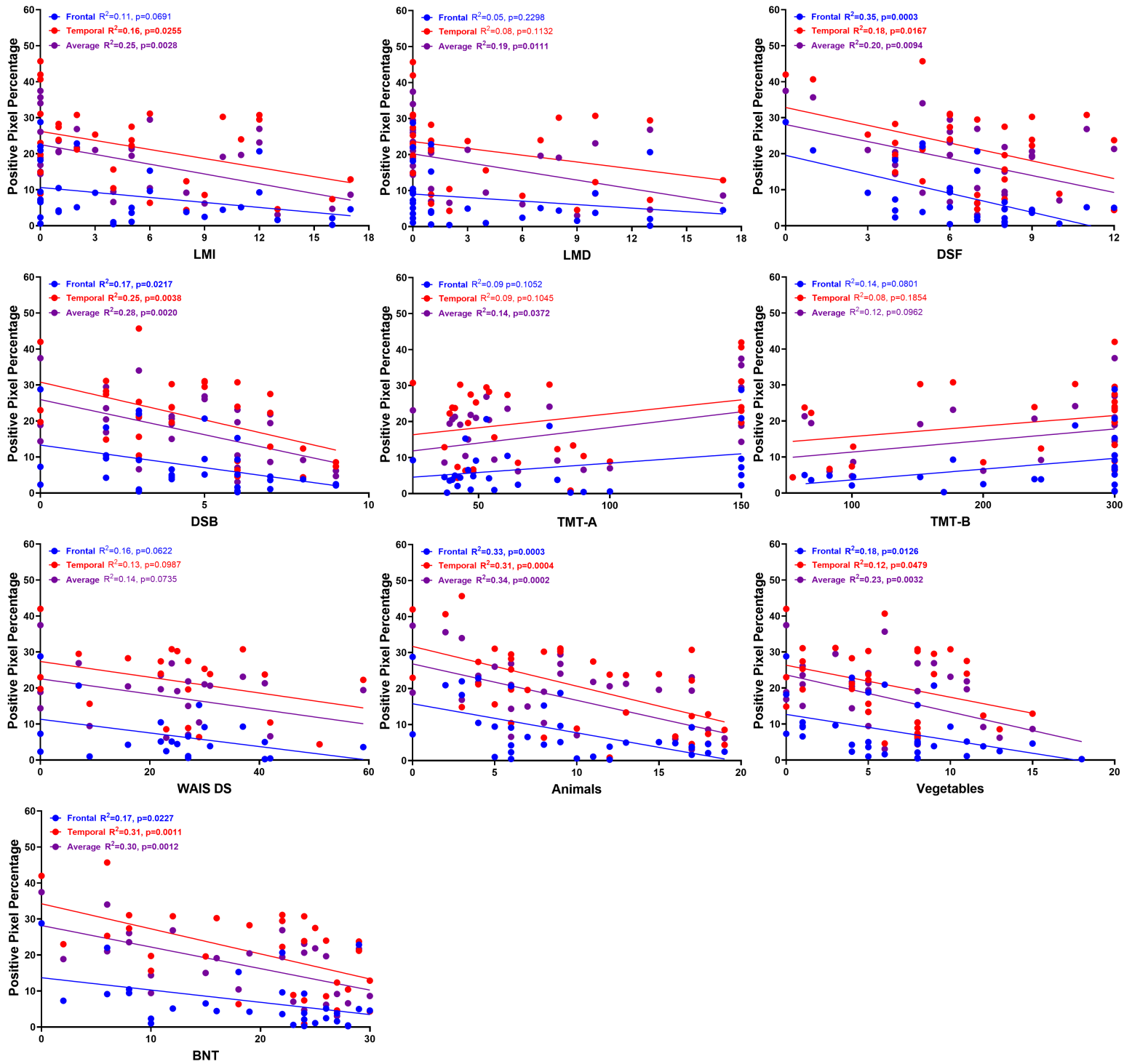




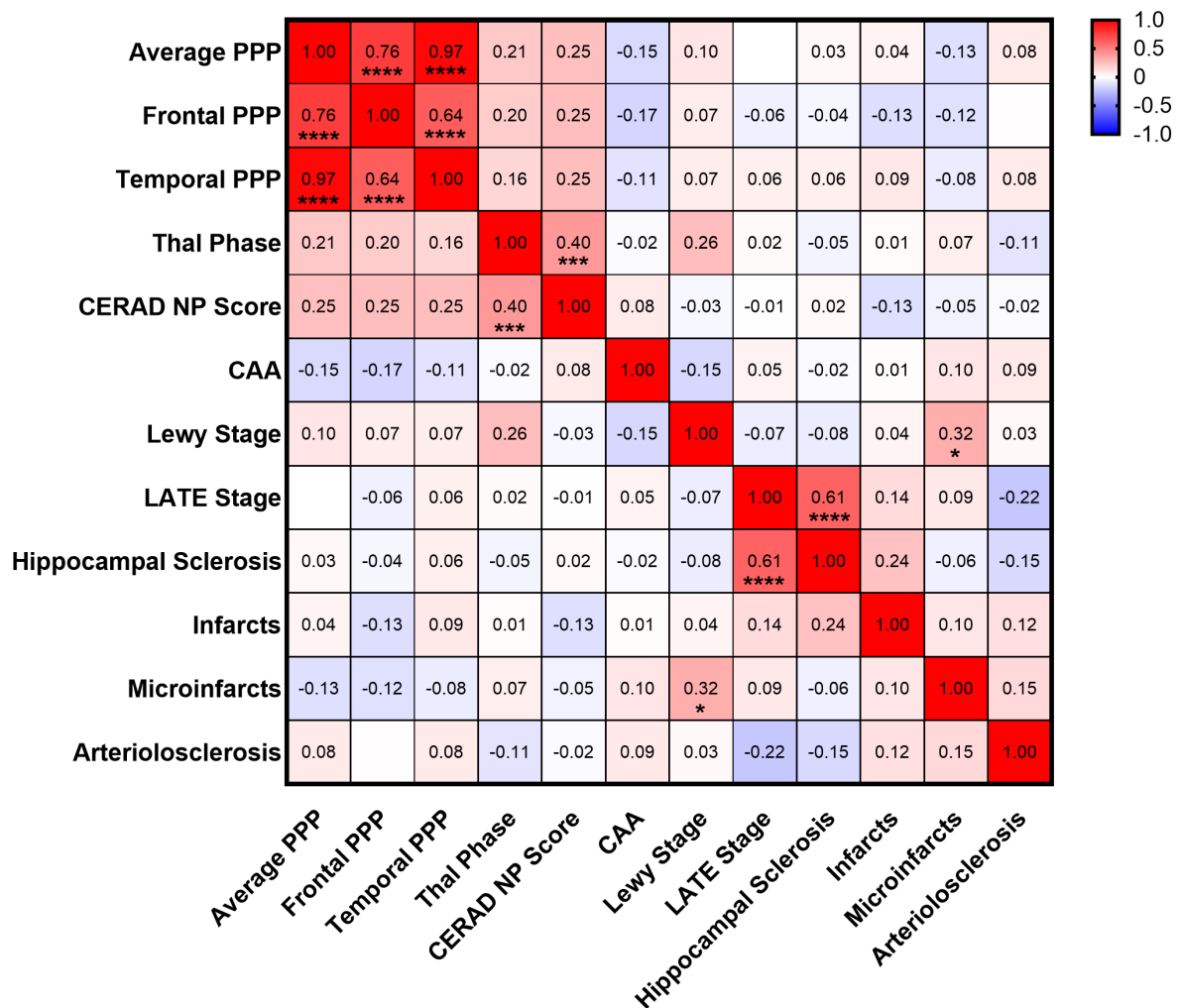
Supplemental Figure S1. Example of gray matter segmentation and positive pixel quantification. Blue represents negative pixels, yellow represents weak positive pixels, orange represents positive pixels, and red represents strong positive pixels. Scale bars = 3 mm in top panels, 600 μ m in bottom panels.



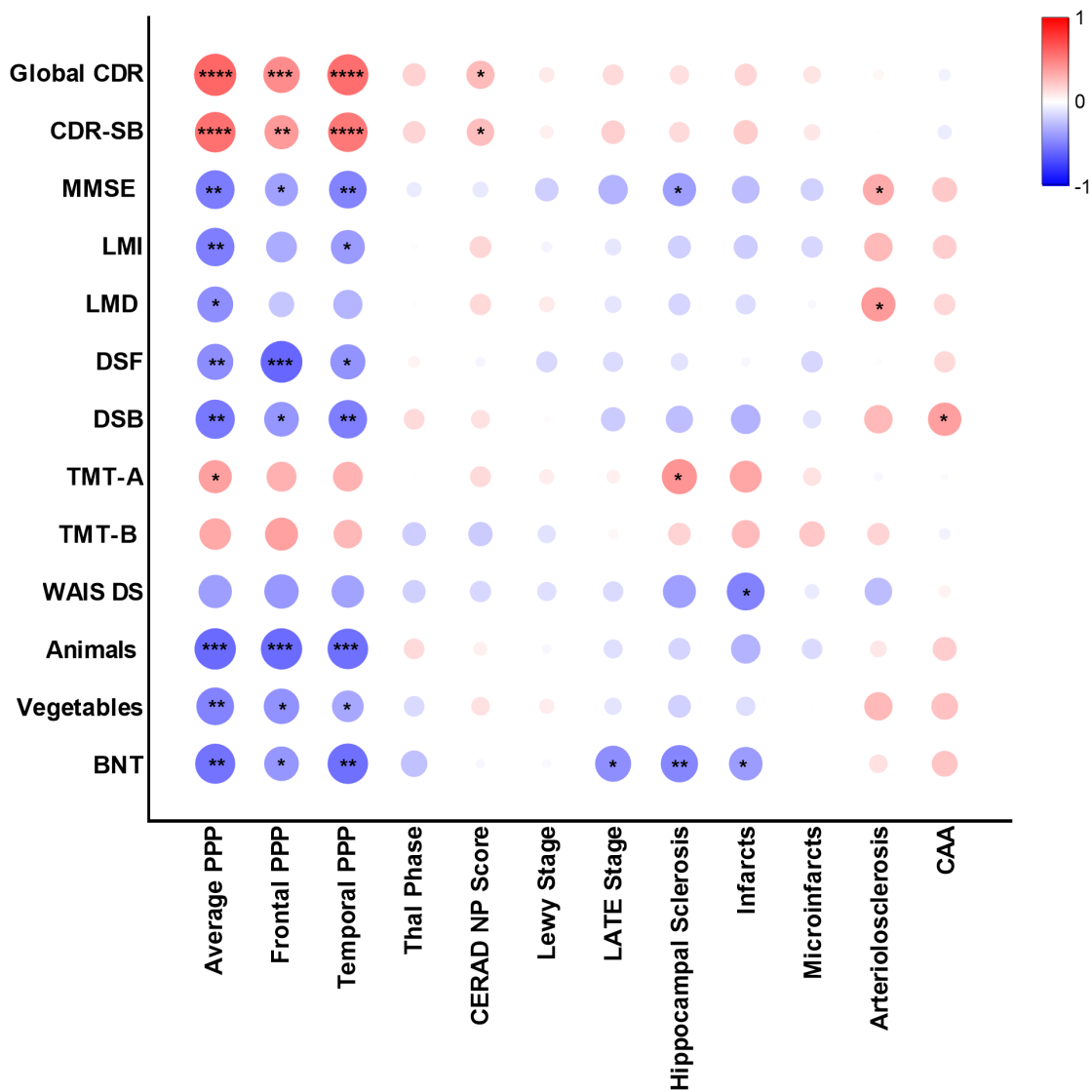
Supplemental Figure S2. Correlations between Braak stage and CDR-SB and MMSE (n=538).



Supplemental Figure S3. Correlations between with frontal, temporal, and average neocortical hyperphosphorylated tau (p-tau) burden quantification and immediate logical memory (LMI), delayed logical memory (LMD), digit span forward (DSF), digit span backward (DSB), trail making test part A (TMT-A), trail making test part B (TMT-B), WAIS digit substitution score (WAIS DS), animal naming (Animals), vegetable naming (Vegetables), and Boston naming test (BNT) using linear regression models.



Supplemental Figure S4. Correlation matrix between pathologic features in the included 61 cases.



Supplemental Figure S5. Unadjusted correlation between cognitive and neuropsychological measures and neuropathologic features. For sample size for each comparison, see [Supplemental Table 1](#).

Supplemental Table S1. Sample size for each clinico-pathologic outcome correlation.

	Global CDR	CDR-SB	MMSE	LMI	LMD	DSF	DSB	TMT-A	TMT-B	WAIS DS	Animals	Vegetables	BNT
Average PPP	61	61	37	33	32	33	32	31	25	23	37	35	32
Frontal PPP	59	59	36	32	31	32	31	29	23	22	35	33	31
Temporal PPP	60	60	36	32	31	32	31	30	24	22	36	34	31
Thal Phase	58	58	34	31	30	31	30	29	24	22	35	33	30
CERAD NP Score	61	61	37	33	32	33	32	31	25	23	37	35	32
Lewy Stage	61	61	37	33	32	33	32	31	25	23	37	35	32
LATE Stage	61	61	37	33	32	33	32	31	25	23	37	35	32
Hippocampal Sclerosis	60	60	36	33	32	33	32	31	25	23	37	35	32
Infarcts	61	61	37	33	32	33	32	31	25	23	37	35	32
Microinfarcts	61	61	37	33	32	33	32	31	25	23	37	35	32
Arteriolosclerosis	61	61	37	33	32	33	32	31	25	23	37	35	32
CAA	61	61	37	33	32	33	32	31	25	23	37	35	32

Supplemental Table S2. Statistical differences for slopes of mixed effects models in cognitive tests between groups.

Measure_Name	Interaction_F	Interaction_P_value	Low_vs_Int_Estimate	Low_vs_Int_SE	Low_vs_Int_P_value	Low_vs_High_Estimate	Low_vs_High_SE	Low_vs_High_P_value	Int_vs_High_Estimate	Int_vs_High_SE	Int_vs_High_P_value
Global CDR	14.32832359	0.0010	1.450114936	0.655399735	0.0747	2.929313668	0.646741002	<0.0001	1.479198732	0.672956365	0.0768
CDR-SB	8.467988766	0.0012	9.101021743	4.109798655	0.0764	15.58522253	4.082308875	0.0009	6.484200784	4.154683945	0.2695
MMSE	9.964975947	0.0004	-15.34893499	5.269986815	0.0136	-21.07877268	5.219620117	0.0004	-5.729837685	5.333958644	0.5332