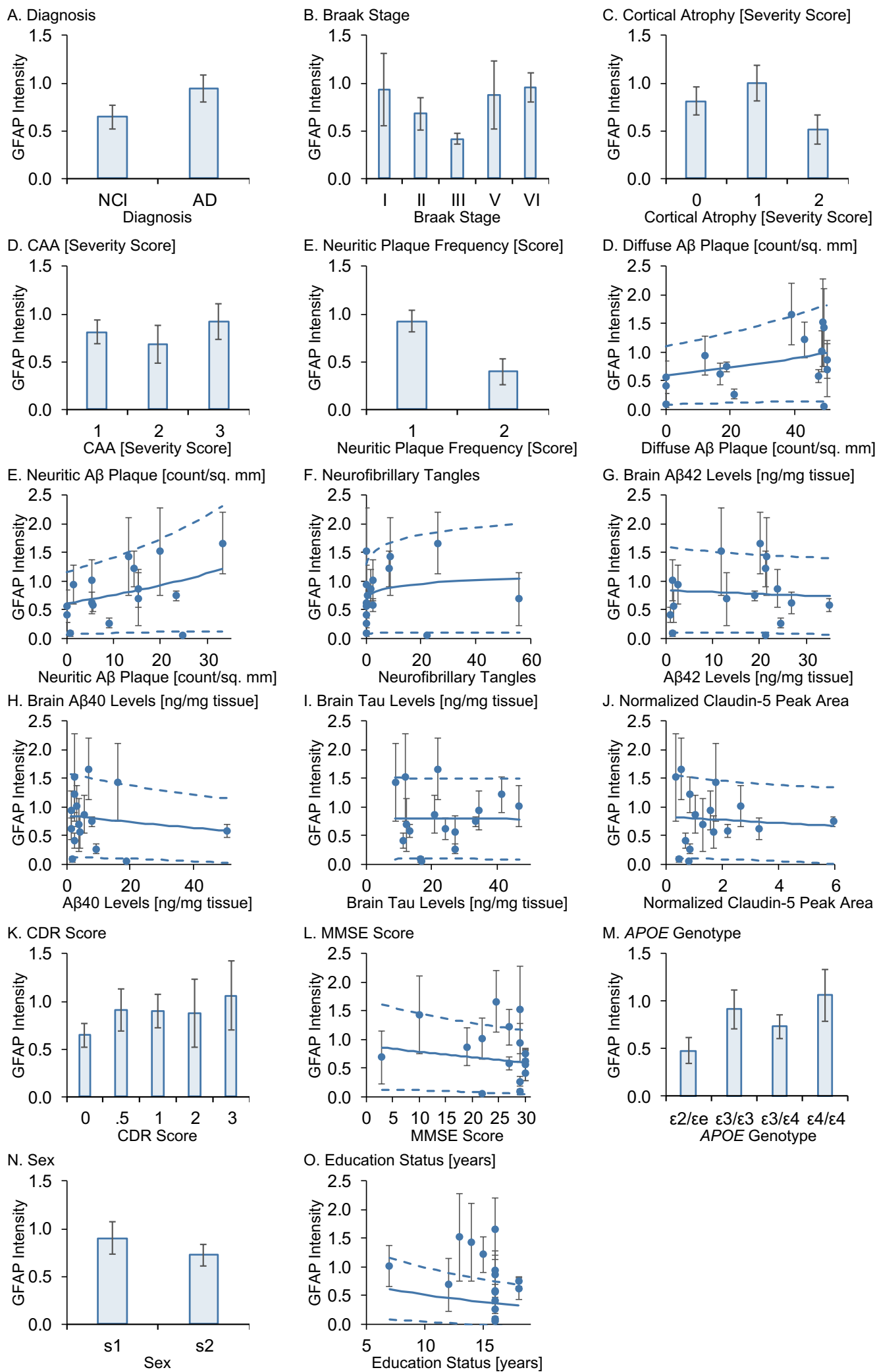
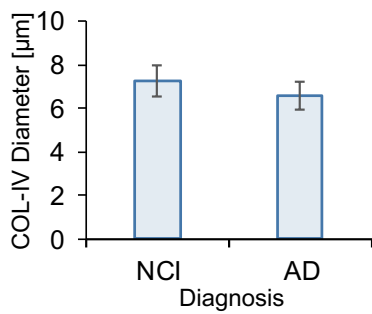


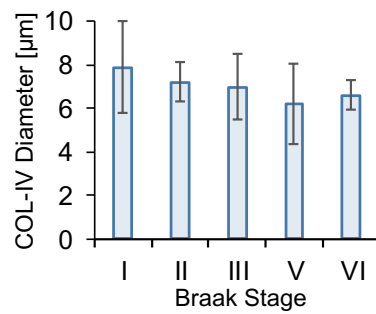
Figure S1



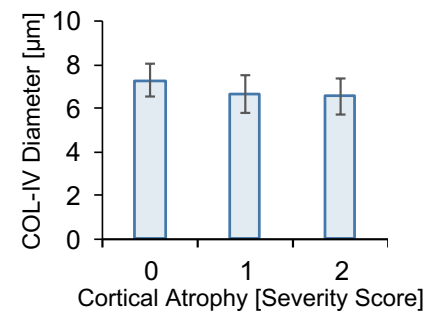
A. Diagnosis



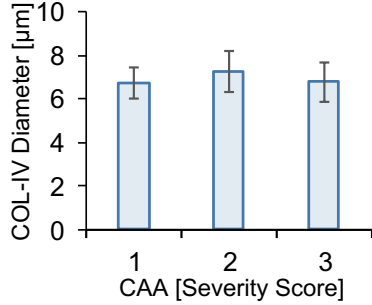
B. Braak Stage



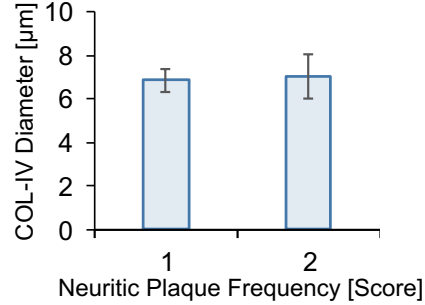
C. Cortical Atrophy [Severity Score]



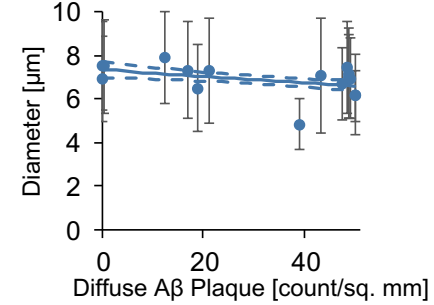
D. CAA [Severity Score]



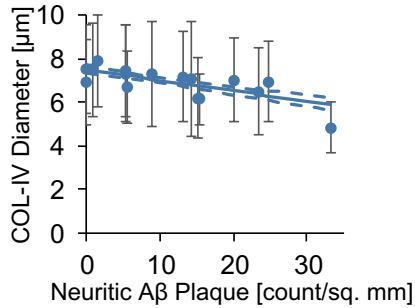
E. Neuritic Plaque Frequency [Score]



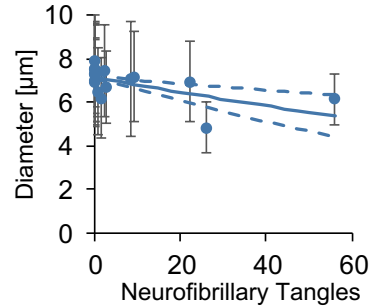
D. Diffuse Aβ Plaque [count/sq. mm]



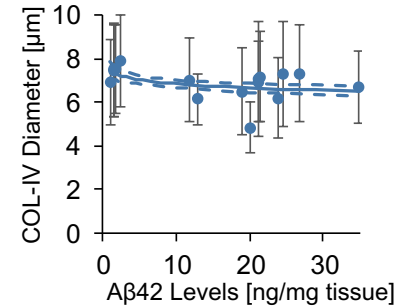
E. Neuritic Aβ Plaque [count/sq. mm]



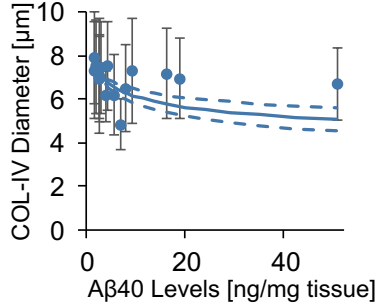
F. Neurofibrillary Tangles



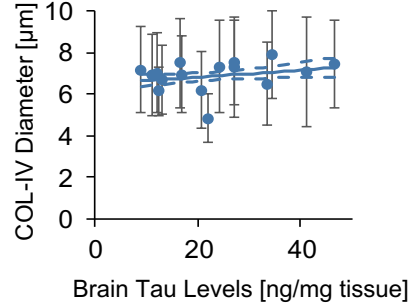
G. Brain Aβ42 Levels [ng/mg tissue]



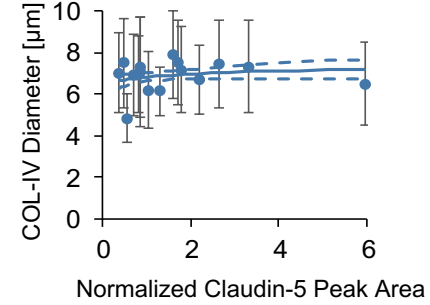
H. Brain Aβ40 Levels [ng/mg tissue]



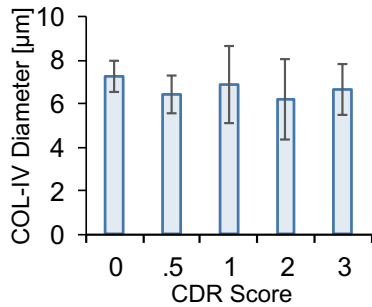
I. Brain Tau Levels [ng/mg tissue]



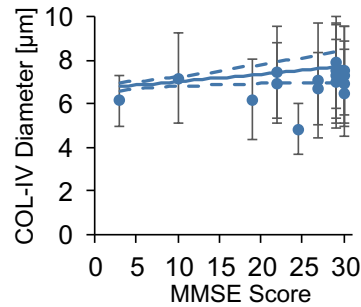
J. Normalized Claudin-5 Peak Area



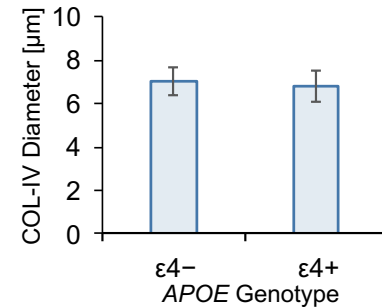
K. CDR Score



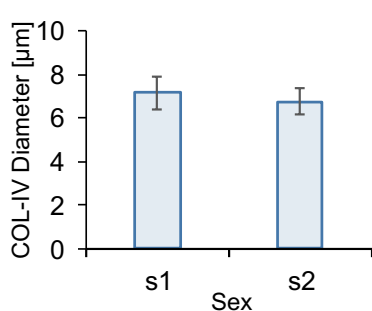
L. MMSE Score



M. APOE Genotype



N. Sex



O. Education Status [years]

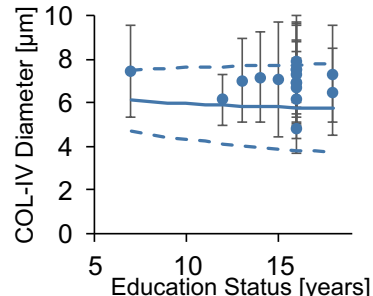
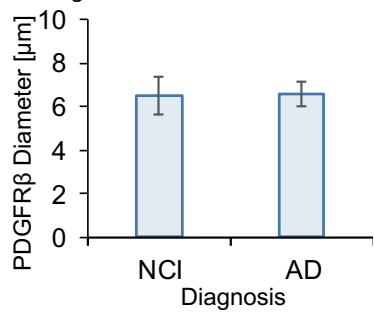
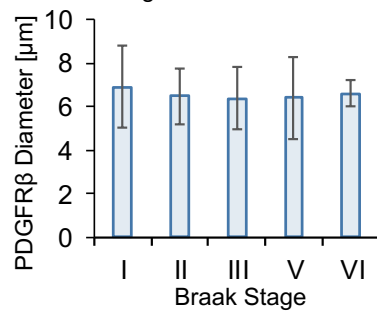


Figure S3

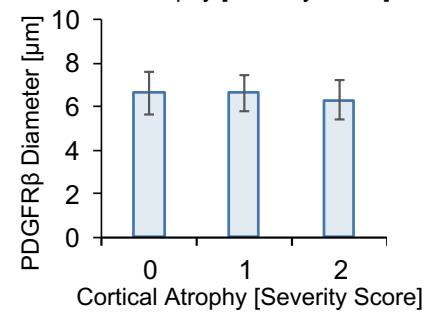
A. Diagnosis



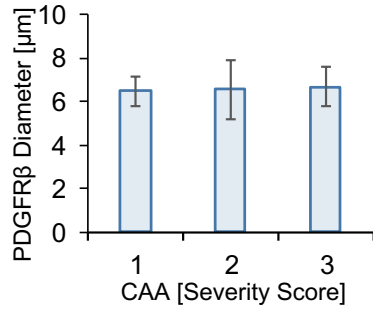
B. Braak Stage



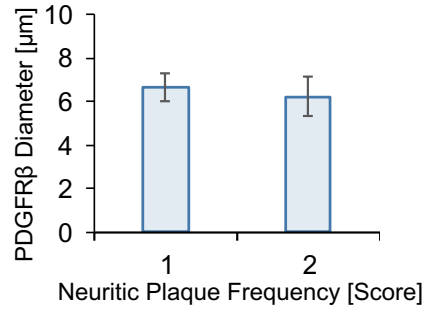
C. Cortical Atrophy [Severity Score]



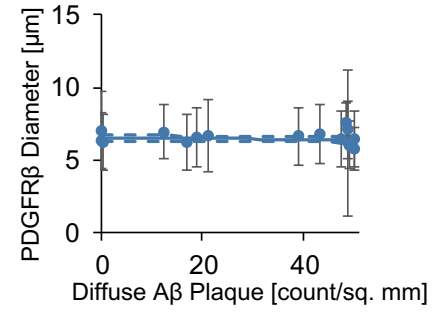
D. CAA [Severity Score]



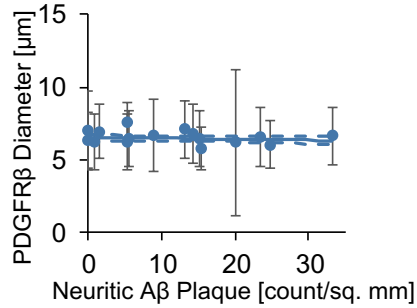
E. Neuritic Plaque Frequency [Score]



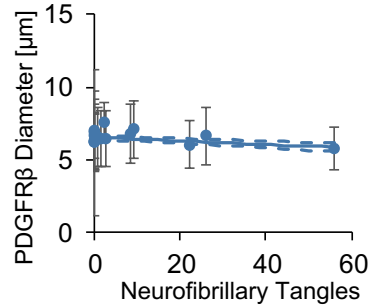
D. Diffuse Aβ Plaque [count/sq. mm]



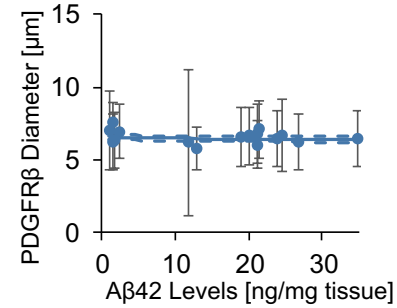
E. Neuritic Aβ Plaque [count/sq. mm]



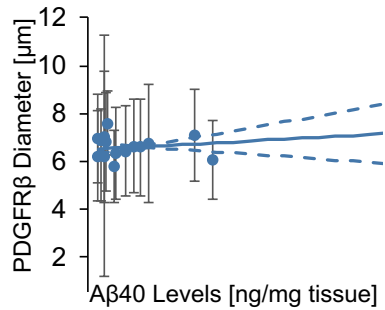
F. Neurofibrillary Tangles



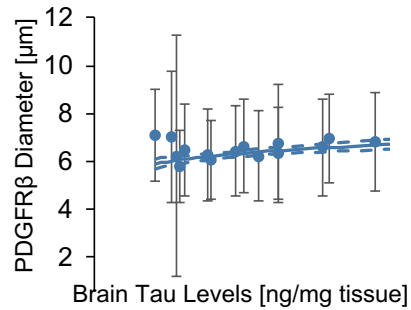
G. Brain Aβ42 Levels [ng/mg tissue]



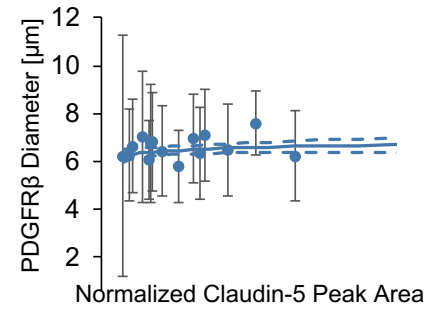
H. Brain Aβ40 Levels [ng/mg tissue]



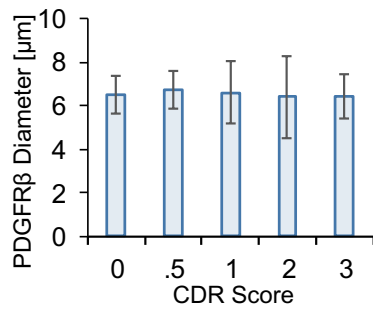
I. Brain Tau Levels [ng/mg tissue]



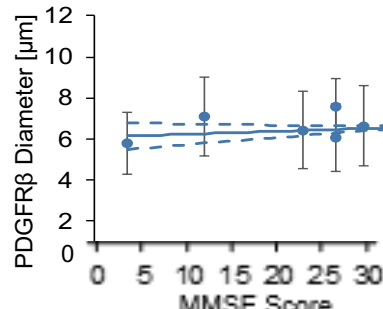
J. Normalized Claudin-5 Peak Area



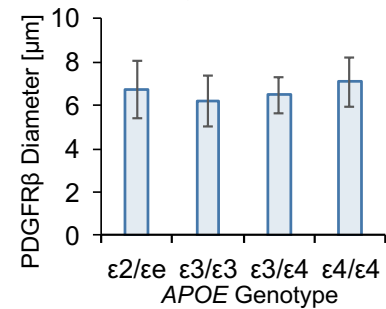
K. CDR Score



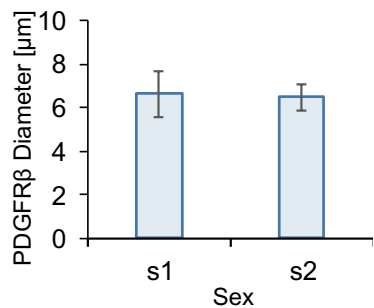
L. MMSE Score



M. APOE Genotype



N. Sex



O. Education Status [years]

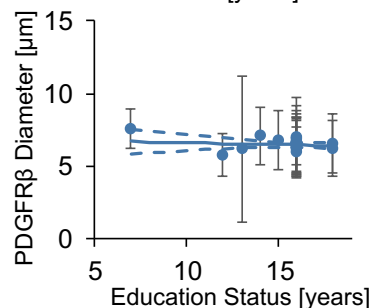


Figure S4

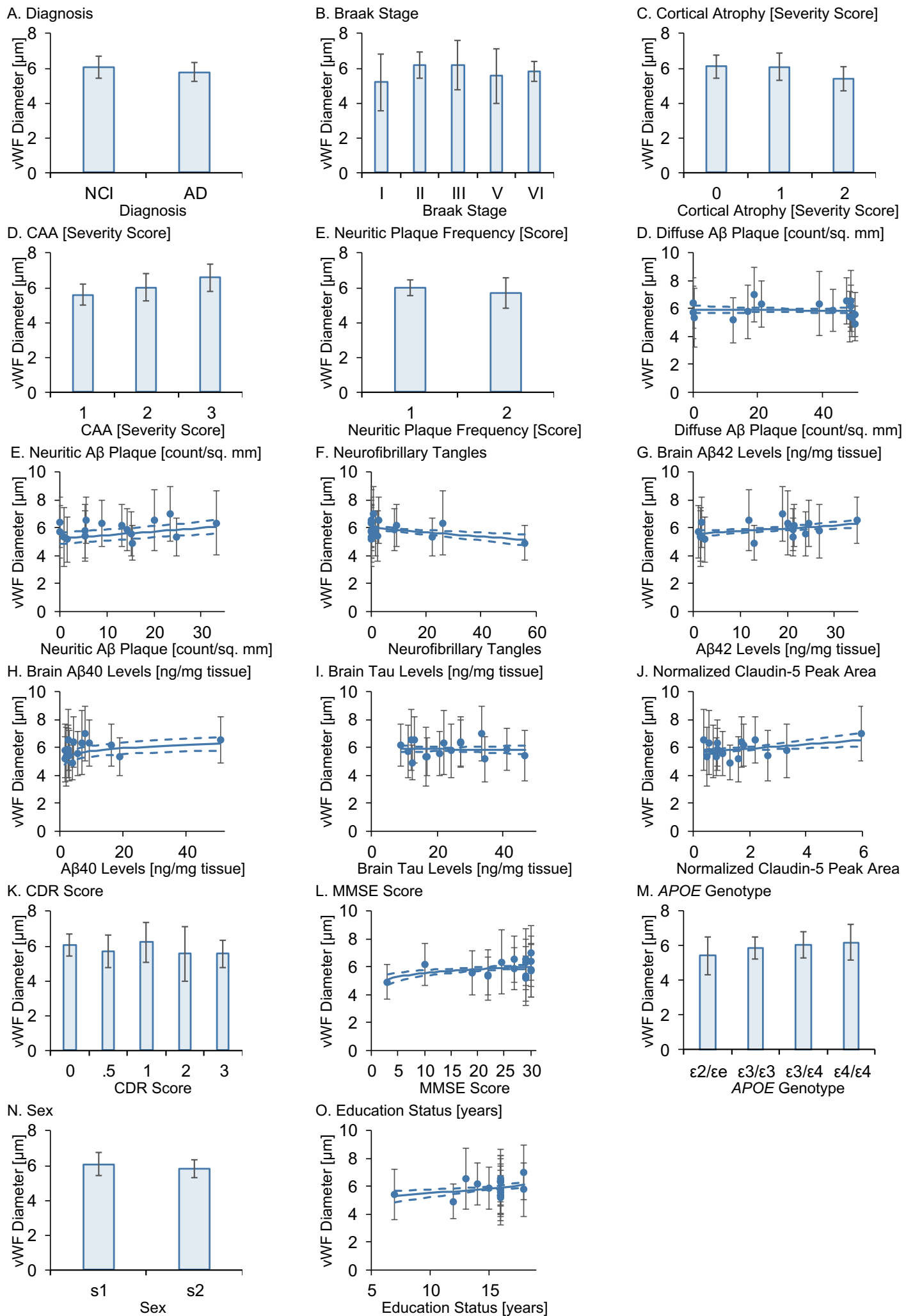
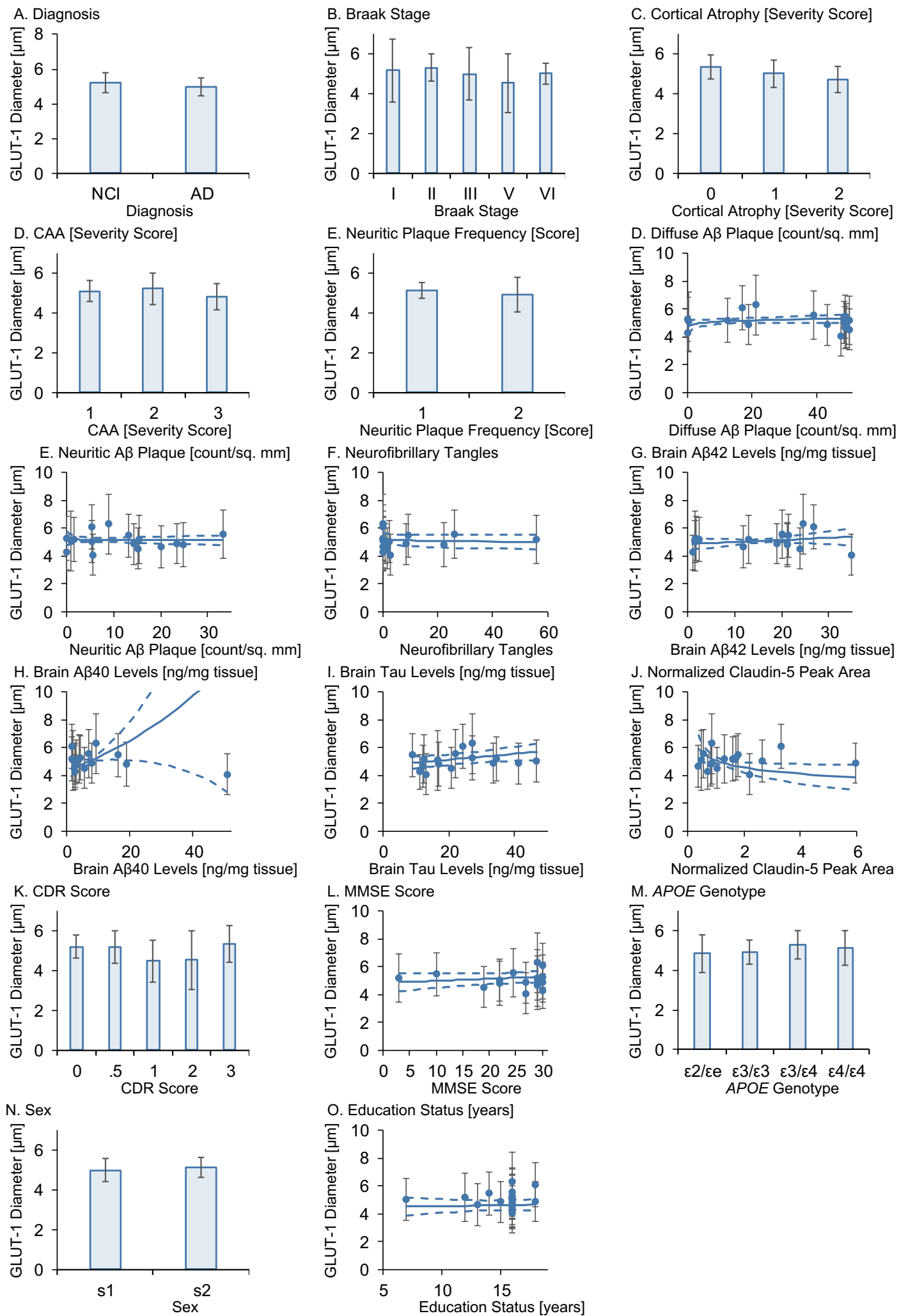
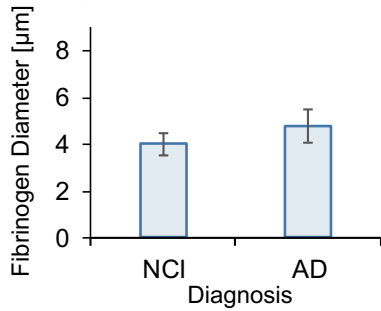


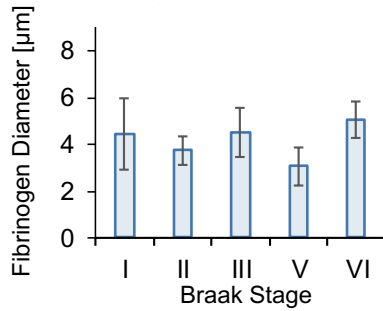
Figure S5



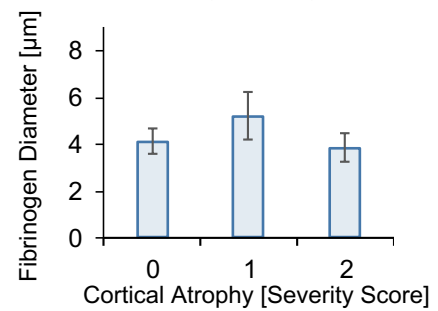
A. Diagnosis



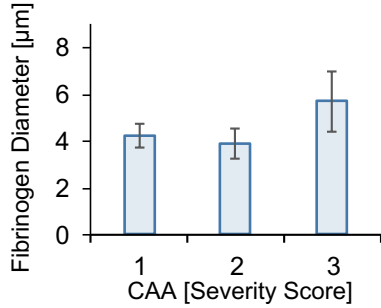
B. Braak Stage



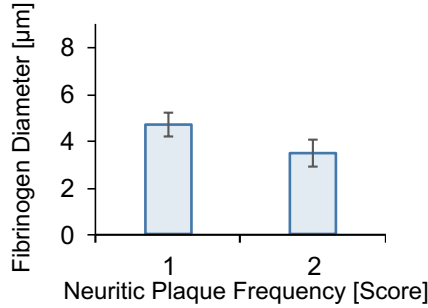
C. Cortical Atrophy [Severity Score]



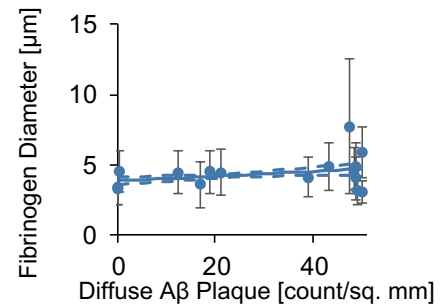
D. CAA [Severity Score]



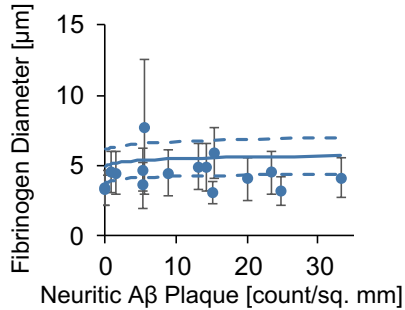
E. Neuritic Plaque Frequency [Score]



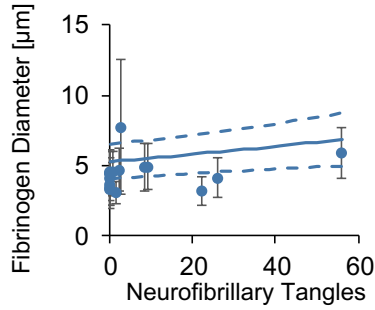
D. Diffuse Aβ Plaque [count/sq. mm]



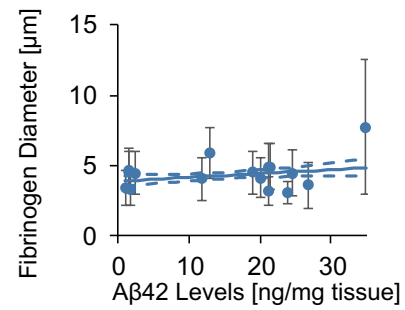
F. Neuritic Aβ Plaque [count/sq. mm]



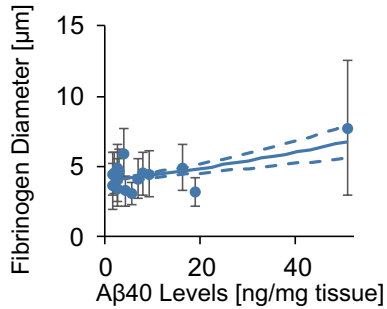
F. Neurofibrillary Tangles



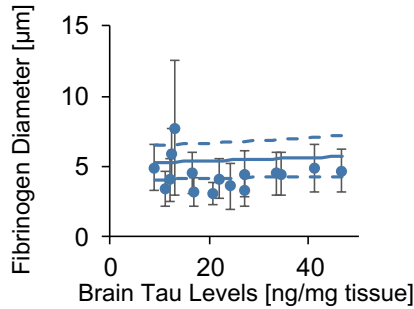
G. Brain Aβ42 Levels [ng/mg tissue]



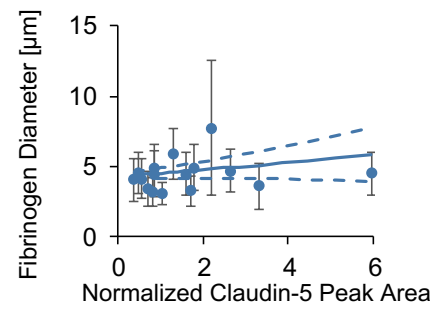
H. Brain Aβ40 Levels [ng/mg tissue]



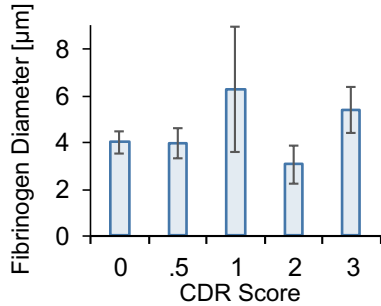
I. Brain Tau Levels [ng/mg tissue]



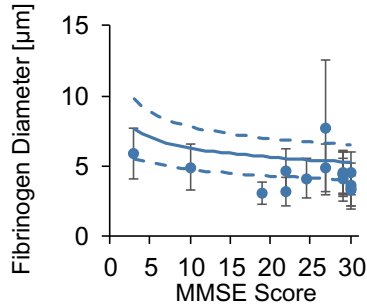
J. Normalized Claudin-5 Peak Area



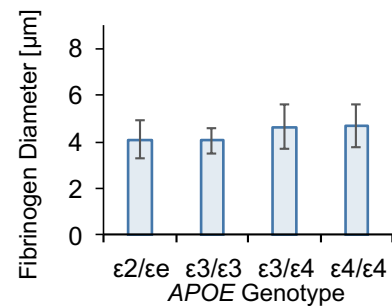
K. CDR Score



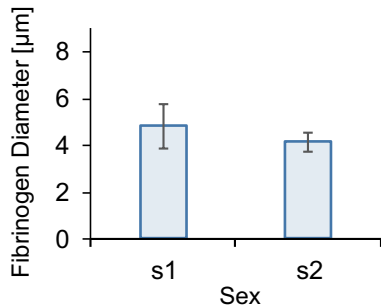
L. MMSE Score



M. APOE Genotype



N. Sex



O. Education Status [years]

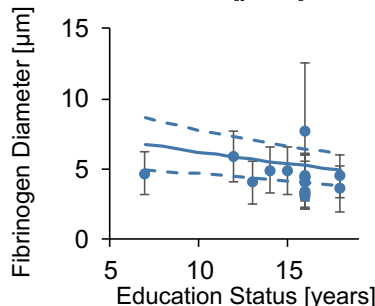


Table S1. Association between GFAP immunoreactivity and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	61.157	0.091	1.887 (1)	0.17	0.647	0.015
MMSE Scores	62.280	0.052	0.666 (1)	0.414	0.783	0.006
CDR Scores	67.985	0.003	2.089 (4)	0.719	0.791	0.015
Education	61.538	0.075	1.450 (1)	0.229	0.647	0.011
DP Score (counts/mm ²)	60.286	0.141	2.891 (1)	0.089	0.623	0.022
NP Score (counts/mm ²)	60.262	0.143	2.979 (1)	0.084	0.623	0.02
Neocortical Plaque Frequency	62.525	0.046	0.404 (1)	0.525	0.791	0.008
CAA Severity Score	64.345	0.019	0.892 (2)	0.64	0.791	0.008
Brain A β ₄₀ (ng/mg tissue weight)	62.437	0.048	0.508 (1)	0.476	0.791	0.004
Brain A β ₄₂ (ng/mg tissue weight)	62.831	0.039	0.106 (1)	0.745	0.791	0.001
Braak Stage	66.337	0.007	4.134 (4)	0.388	0.783	0.026
NFT Score (counts/mm ²)	61.511	0.076	1.501 (1)	0.22	0.647	0.012
Brain Tau (ng/mg tissue weight)	62.935	0.037	0.001 (1)	0.973	0.973	<0.001
Cortical Atrophy	61.371	0.082	4.415 (2)	0.11	0.623	0.028
Normalized Claudin-5 Peak Area	62.798	0.040	0.140 (1)	0.709	0.791	0.001
APOE Genotype	62.081	0.057	0.869 (1)	0.351	0.783	0.007
Gender	62.657	0.043	0.280 (1)	0.597	0.791	0.003

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S2. Associations between microvascular COL-IV diameters and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	633.009	0.016	4.414 (1)	0.036	0.121	0.032
MMSE Scores	638.454	0.001	1.715 (1)	0.190	0.288	0.011
CDR Scores	640.878	0.000	6.172 (4)	0.187	0.288	0.037
Education	639.830	0.001	0.260 (1)	0.610	0.648	0.002
DP Score (counts/mm ²)	637.670	0.002	2.605 (1)	0.107	0.226	0.022
Neuritic Plaque Frequency	639.890	0.001	0.198 (1)	0.656	0.656	0.002
CAA Severity Score	637.421	0.002	6.798 (2)	0.033	0.121	0.015
Brain A β_{42} (ng/mg tissue weight)	636.929	0.002	3.487 (1)	0.062	0.175	0.031
NFT Score (counts/mm ²)	631.244	0.039	2.381 (1)	0.123	0.232	0.030
Brain Tau (ng/mg tissue weight)	639.196	0.001	0.916 (1)	0.339	0.443	0.008
Cortical Atrophy	638.124	0.001	4.920 (2)	0.085	0.207	0.034
Normalized Claudin-5 Peak Area	639.482	0.001	0.617 (1)	0.432	0.525	0.005
APOE Genotype	639.700	0.001	0.393 (1)	0.531	0.602	0.004
Gender	638.148	0.001	1.616 (1)	0.204	0.288	0.009

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S3. Associations between microvascular PDGFR β diameters and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	822.934	0.005	0.000 (1)	0.987	0.987	<0.001
MMSE Scores	819.349	0.033	0.399 (1)	0.528	0.849	0.004
CDR Scores	828.231	0.000	0.718 (4)	0.949	0.987	0.002
Education	821.203	0.013	0.066 (1)	0.797	0.987	<0.001
DP Score (counts/mm ²)	822.586	0.006	0.358 (1)	0.549	0.849	0.001
NP Score (counts/mm ²)	822.526	0.007	0.419 (1)	0.517	0.849	0.001
Neuritic Plaque Frequency	820.712	0.016	3.261 (1)	0.071	0.302	0.007
CAA Severity Score	823.521	0.004	1.470 (2)	0.480	0.849	0.005
Brain A β ₄₀ (ng/mg tissue weight)	822.385	0.007	0.559 (1)	0.455	0.849	0.001
Brain A β ₄₂ (ng/mg tissue weight)	822.306	0.007	0.209 (1)	0.647	0.917	0.006
Braak Stage	828.034	0.000	0.955 (4)	0.916	0.987	0.003
NFT Score (counts/mm ²)	818.775	0.043	4.786 (1)	0.029	0.163	0.009
Brain Tau (ng/mg tissue weight)	813.139	0.727	5.583 (1)	0.018	0.154	0.016
Cortical Atrophy	822.686	0.006	2.385 (2)	0.303	0.849	0.006
Normalized Claudin-5 Peak Area	821.980	0.009	0.933 (1)	0.334	0.849	0.005
APOE Genotype	816.920	0.110	12.503 (3)	0.006	0.099	0.023
Gender	822.882	0.006	0.052 (1)	0.819	0.987	<0.001

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S4. Associations between microvascular vWF diameters and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	1327.313	0.020	0.843 (1)	0.358	0.464	0.005
MMSE Scores	1324.899	0.067	3.581 (1)	0.058	0.164	0.017
CDR Scores	1331.365	0.003	3.035 (4)	0.552	0.626	0.015
Education	1326.150	0.036	2.126 (1)	0.145	0.246	0.013
DP Score (counts/mm ²)	1328.083	0.014	0.054 (1)	0.816	0.867	<0.001
NP Score (counts/mm ²)	1326.184	0.035	4.452 (1)	0.035	0.164	0.020
Neuritic Plaque Frequency	1327.290	0.020	0.868 (1)	0.352	0.464	0.006
Brain A β ₄₂ (ng/mg tissue weight)	1325.673	0.045	2.669 (1)	0.102	0.217	0.016
Braak Stage	1330.055	0.005	4.651 (4)	0.325	0.464	0.029
NFT Score (counts/mm ²)	1325.096	0.061	3.337 (1)	0.068	0.164	0.017
Brain Tau (ng/mg tissue weight)	1328.120	0.013	0.017 (1)	0.897	0.897	<0.001
Cortical Atrophy	1324.939	0.066	6.117 (2)	0.047	0.164	0.028
Normalized Claudin-5 Peak Area	1326.016	0.038	2.285 (1)	0.131	0.246	0.014
APOE Genotype	1325.045	0.062	3.428 (1)	0.064	0.164	0.020
Gender	1327.389	0.019	0.764 (1)	0.382	0.464	0.005

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S5. Associations between microvascular GLUT-1 diameters and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	1823.524	0.000	0.657 (1)	0.418	0.811	0.008
MMSE Scores	1823.864	0.000	0.304 (1)	0.581	0.811	0.003
CDR Scores	1827.074	0.000	3.427 (4)	0.489	0.811	0.035
Education	1824.130	0.000	0.038 (1)	0.846	0.885	<0.001
DP Score (counts/mm ²)	1811.927	0.113	0.664 (1)	0.415	0.811	0.018
NP Score (counts/mm ²)	1811.508	0.139	0.021 (1)	0.885	0.885	0.001
Neuritic Plaque Frequency	1813.781	0.045	1.062 (1)	0.303	0.811	0.024
CAA Severity Score	1825.662	0.000	0.517 (2)	0.772	0.875	0.006
Brain A β ₄₀ (ng/mg tissue weight)	1809.714	0.340	1.258 (1)	0.262	0.811	0.339
Brain A β ₄₂ (ng/mg tissue weight)	1810.195	0.268	0.243 (1)	0.622	0.811	0.010
Braak Stage	1826.998	0.000	3.459 (4)	0.484	0.811	0.037
NFT Score (counts/mm ²)	1823.984	0.000	0.184 (1)	0.668	0.811	0.002
Brain Tau (ng/mg tissue weight)	1822.889	0.000	1.324 (1)	0.250	0.811	0.011
Cortical Atrophy	1820.919	0.001	6.046 (2)	0.049	0.811	0.052
Normalized Claudin-5 Peak Area	1814.430	0.032	1.236 (1)	0.266	0.811	0.086
APOE Genotype	1813.176	0.060	2.135 (1)	0.144	0.811	0.238
Gender	1822.785	0.000	0.383 (1)	0.536	0.811	0.009

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S6. Associations between microvascular fibrinogen diameters and candidate predictor variables

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Diagnosis	1558.084	0.078	1.698 (1)	0.193	0.298	0.029
MMSE Scores	1557.722	0.094	5.662 (1)	0.017	0.074	0.034
CDR Scores	1559.770	0.034	2.863 (1)	0.091	0.193	0.023
Education	1559.619	0.036	3.076 (1)	0.079	0.193	0.017
DP Score (counts/mm ²)	1558.981	0.050	2.252 (1)	0.133	0.227	0.034
NP Score (counts/mm ²)	1561.516	0.014	0.879 (1)	0.349	0.370	0.008
CAA Severity Score	1558.671	0.058	6.998 (2)	0.030	0.103	0.100
Brain A β_{42} (ng/mg tissue weight)	1561.097	0.017	1.429 (1)	0.232	0.303	0.025
NFT Score (counts/mm ²)	1560.085	0.029	2.505 (1)	0.113	0.214	0.018
Brain Tau (ng/mg tissue weight)	1562.129	0.010	0.239 (1)	0.625	0.625	0.002
Cortical Atrophy	1559.319	0.042	6.052 (2)	0.049	0.137	0.082
Normalized Claudin-5 Peak Area	1561.603	0.013	0.883 (1)	0.347	0.370	0.015
APOE Genotype	1561.189	0.017	1.323 (1)	0.250	0.304	0.022
Gender	1561.006	0.018	1.522 (1)	0.217	0.303	0.025

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S7. Associations between Braak stage and peripheral biomarkers

Predictor	AICc	Probability ^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i> ²
Plasma NSE (ng/mL)	38.960	0.022	4.122 (1)	0.042	0.121	0.302
Plasma MMP-2 (ng/mL)	37.926	0.038	5.156 (1)	0.023	0.084	0.363

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S8. Associations between cortical atrophy and peripheral biomarkers

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Plasma S100 β (pg/mL)	34.660	0.376	2.420 (1)	0.120	0.252	0.191
Plasma NSE (ng/mL)	36.952	0.120	0.128 (1)	0.721	0.817	0.011
Plasma MMP-2 (ng/mL)	34.647	0.379	2.433 (1)	0.119	0.252	0.192
Plasma MMP-9 (ng/mL)	36.861	0.125	0.219 (1)	0.640	0.817	0.019

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S9. Associations between CAA severity scores and peripheral biomarkers

Predictor	AICc	Probability ^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i> ²
Plasma S100 β (pg/mL)	36.447	0.252	0.128 (1)	0.720	0.817	0.011
Plasma NSE (ng/mL)	36.453	0.252	0.122 (1)	0.727	0.817	0.011
Plasma MMP-2 (ng/mL)	36.473	0.249	0.102 (1)	0.749	0.817	0.009
Plasma MMP-9 (ng/mL)	36.494	0.247	0.081 (1)	0.776	0.817	0.007

^aProbability

of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S10. Associations between Neuritic Plaque Frequency and peripheral biomarkers

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Plasma S100 β (pg/mL)	18.769	0.099	0.476 (1)	0.490	0.754	0.046
Plasma NSE (ng/mL)	18.942	0.091	0.303 (1)	0.582	0.817	0.022
Plasma MMP-2 (ng/mL)	19.156	0.081	0.089 (1)	0.765	0.817	0.006
Plasma MMP-9 (ng/mL)	14.769	0.729	4.477 (1)	0.034	0.111	0.305

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S11. Associations between CDR Scores and peripheral biomarkers

Predictor	AICc	Probability^a	χ^2	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Plasma NSE (ng/mL)	52.633	0.024	4.395 (1)	0.036	0.111	0.303
Plasma MMP-9 (ng/mL)	54.710	0.009	2.319 (1)	0.128	0.256	0.172

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S12. Associations between MMSE Scores and peripheral biomarkers

Predictor	AICc	Probability ^a	F-value	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i> ²
Plasma S100β (pg/mL)	16.664	0.151	4.847 (1,11)	0.050	0.125	0.228
Plasma NSE (ng/mL)	20.766	0.019	0.559 (1,11)	0.471	0.753	< 0.001
Plasma MMP-9 (ng/mL)	20.677	0.020	0.638 (1,11)	0.441	0.753	< 0.001

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S13. Associations between brain A β ₄₀ levels and peripheral biomarkers

Predictor	AICc	Probability ^a	F-value	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i> ²
Plasma MMP-2 (ng/mL)	13.443	0.069	0.564 (1,11)	0.468	0.753	< 0.001
Plasma NSE (ng/mL)	13.688	0.061	0.417 (1,11)	0.532	0.788	< 0.001
Plasma MMP-9 (ng/mL)	11.705	0.165	4.844 (1,11)	0.050	0.125	0.228

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S14. Associations between brain A β ₄₂ levels and peripheral biomarkers

Predictor	AICc	Probability ^a	F-value	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i> ²
Plasma S100 β (pg/mL)	24.670	0.623	4.486 (1,11)	0.058	0.136	0.211
Plasma MMP-2 (ng/mL)	27.970	0.120	0.679 (1,11)	0.427	0.753	< 0.001
Plasma NSE (ng/mL)	28.384	0.097	0.047 (1,11)	0.832	0.853	< 0.001
Plasma MMP-9 (ng/mL)	27.391	0.160	1.428 (1,11)	0.257	0.490	0.032

^aProbability of specific predictor being "correct" vs alternative predictors, derived from Δ AICc (Burnham & Anderson, 2002).

Table S15. Associations between brain Tau levels and peripheral biomarkers

Predictor	AICc	Probability^x	F-value	Raw <i>p</i> value	Adjusted <i>p</i> value	<i>R</i>²
Plasma S100β (pg/mL)	20.239	0.230	0.012 (1,11)	0.915	0.915	< 0.001
Plasma MMP-2 (ng/mL)	20.034	0.255	0.186 (1,11)	0.675	0.817	< 0.001
Plasma NSE (ng/mL)	20.137	0.242	0.088 (1,11)	0.772	0.817	< 0.001
Plasma MMP-9 (ng/mL)	19.897	0.273	0.293 (1,11)	0.599	0.817	< 0.001

^aProbability of specific predictor being "correct" vs alternative predictors, derived from ΔAICc (Burnham & Anderson, 2002).