

## SUPPLEMENT

### *Additional Results ECM Analyses Including Negative Correlations*

Different approaches to account for negative correlations between time courses in the similarity matrices: ADD= negative and positive correlations are considered by adding a +1 to all values, ABS= negative and positive correlations are weighted equally by using their absolute value, and NEG= taking only negative correlations into account.

### TABLES

**Supplemental Table 1** Scanner and Parameter applied in the respective cohorts.

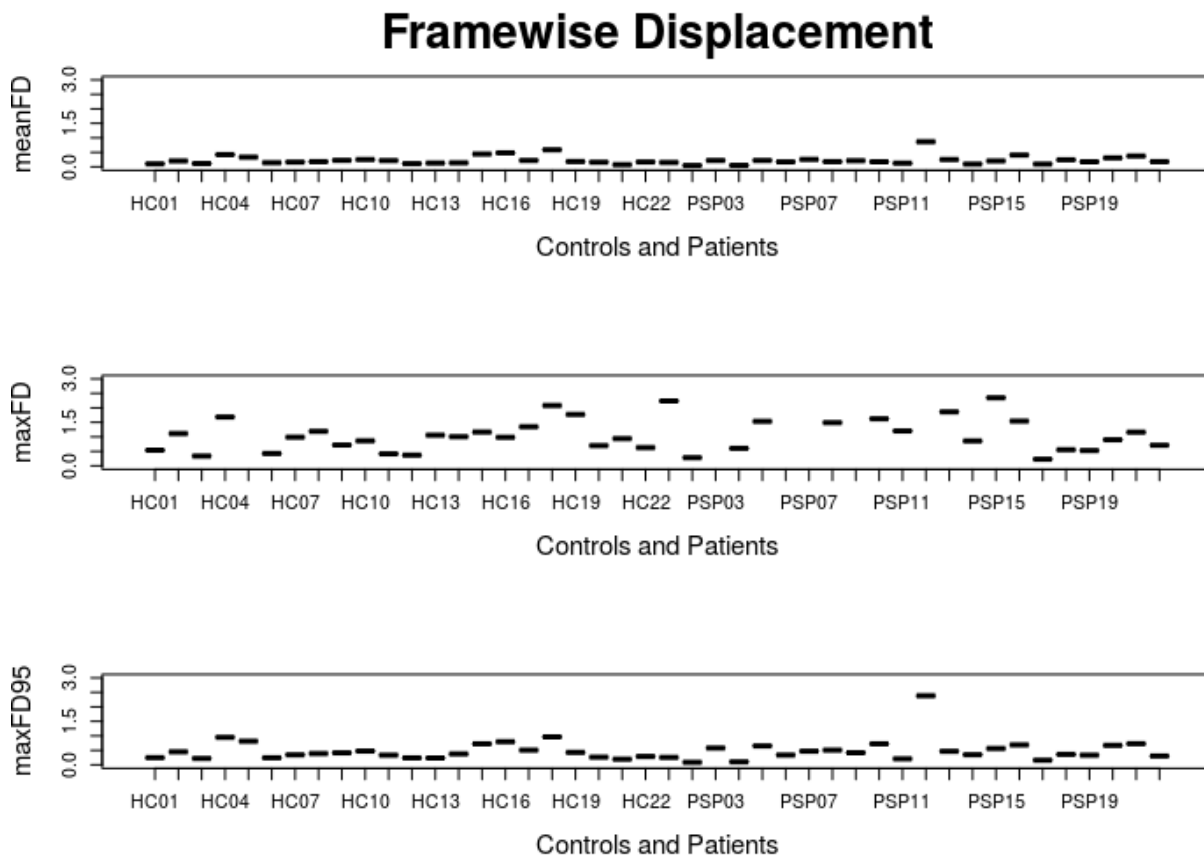
Cohort	Scanner		Rs-fMRI				T1-MRI		
	Manufacturer	Model	TE	TR	Volumes	Flip-angle	Dimension	TE	TR
Prague A	Siemens	TrioTim	30	2000	304	70°	3*3*3	2.3	2300
Prague B	Siemens	Skyra	30	2000	304	70°	3*3*3.45	2.3	2300
FTLD	Siemens	Prisma, Skyra, TrioTim, Verio	30	2000	300	90°	3*3*5	2.98	2300

Echotime (TE) and Repetition time (TR) in ms. Abbreviations rs-fMRI resting-state functional magnetic resonance tomography.

**Supplemental Table 2** Framewise displacement (FD) measures in the different cohorts.

Cohort	Mean FD	Statistical differences	Max FD	Statistical differences	Max FD 95%	Statistical differences
Prague vs. FTLD	0.214±0.153 0.262±0.151	t=-0.981, df=26, p=0.336	1.730±1.536 1.005±0.522	t=2.313, df=40, p=0.026	0.486±0.412 0.479±0.251	t=0.071, df=39, p=0.944
PSP vs. Controls	0.228±0.170 0.230±0.137	t=0.046, df=40, p=0.964	1.913±1.670 1.087±0.723	t=-2.132, df=29, p=0.042	0.517±0.461 0.451±0.242	t=-0.593, df=33, p=0.557

Mean±standard deviations in mm are shown for mean FD, maximum FD and maximum FD after removing the 5% largest movements. Student's *T*-test was applied to compare numerical variables.



**Supplemental Figure 1** Framewise displacement (FD) measures before motion correction in progressive supranuclear palsy (PSP) and healthy controls group (HC).