

Characteristic patterns of inter- and intra-hemispheric metabolic connectivity in patients with stable and progressive mild cognitive impairment and Alzheimer's disease

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Supplementary information

Table S1. Summary of subject information. Group demographics and clinical data at 6 months follow-up.

Variable	Mean (\pm SD)			
	NC	pMCI	AD	sMCI
No. subjects	100	56	100	45
Gender (male/female)	61/39	35/21	58/42	32/13
Age (years)	75.6 (\pm 4.3)	75.4 (\pm 6.4)	76 (\pm 6.7)	77.1 (\pm 7)
Education (years)	15.1 (\pm 3.2)	15.8 (\pm 2.9)	15.5 (\pm 3.1)	14.8 (\pm 3.3)
Weight (kg)	75.5 (\pm 13.6)	72.5 (\pm 15.9)	76.1 (\pm 15.4)	79.1 (\pm 13)
MMSE	29.1 (\pm 0.9)	26 (\pm 2.7)	21.9 (\pm 4)	27 (\pm 4.6)
Global CDR	0.01 (\pm 0.1)	0.51 (\pm 0.1)	0.93 (\pm 0.5)	0.47 (\pm 0.1)

Table S2. Nodes with significantly different SUVR in group comparison of NC, pMCI, AD and sMCI.

Comparsion	Features (90 nodes)	No.
NC-sMCI	16, 20, 28, 40, 42, 43, 58, 61, 65, 73, 87, 88	12
NC-pMCI	1-28, 30-34, 36, 38-43, 47-54, 56-66, 68, 70, 71, 73, 75-79, 81-86, 88-89	76
NC-AD	2-8, 12-20, 23, 25-28, 30-34, 38-44, 47-52, 57-65, 68, 70, 71, 73, 75-79, 83-88	63
sMCI-pMCI	2-5, 17-18,31, 33, 34, 37, 41, 43, 49, 50, 52, 64, 78-79, 82-84	21
sMCI-AD	4, 18, 20, 30, 31, 33, 34, 41, 43, 63, 64, 76, 78, 79, 86, 88	16
pMCI-AD	37, 54, 74, 80, 82	5

Table S3. Number of edges for inter and intra-hemispheric network for each group.

Disease (No. Nodes)	No. Edges			Total
	L-L	R-R	L-R	
NC (90)	138	111	180	429
sMCI (88)	114	107	169	390
pMCI (85)	73	70	105	248
AD (86)	78	57	36	171

L-L: Left intra-hemisphere, **R-R:** Right intra-hemisphere, and **L-R: Left and right inter-hemisphere**

Table S4. Number of edges rate for Left Hemispheric network.

Left Hemispheric (No.edges rate)	$(sMCI-NC)/NC$	$(pMCI-sMCI)/sMCI$
temporal-occipital	1.5	-1
temporal-frontal	-0.6	-0.5
parietal-occipital	-0.5	1.5

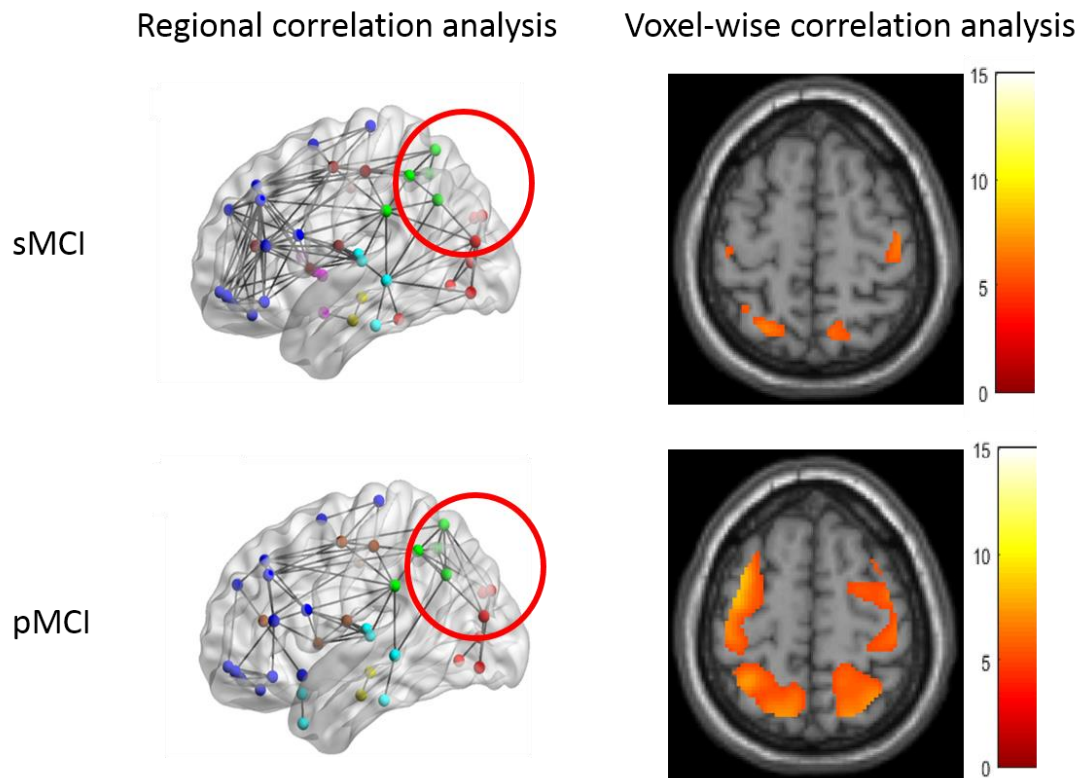


Figure S1. Comparison between regional and voxel-wise correlation analysis in parietal lobe of sMCI and pMCI. The right side was showed our finding result. Another side, we used voxel-wise correlation analysis and the significance threshold: $p < 0.05$, correlation for multiple comparison (FWE with MMSE). The chose region (red cicle part) is left occipital-parietal connectivity.

Regional correlation analysis

Voxel-wise correlation analysis

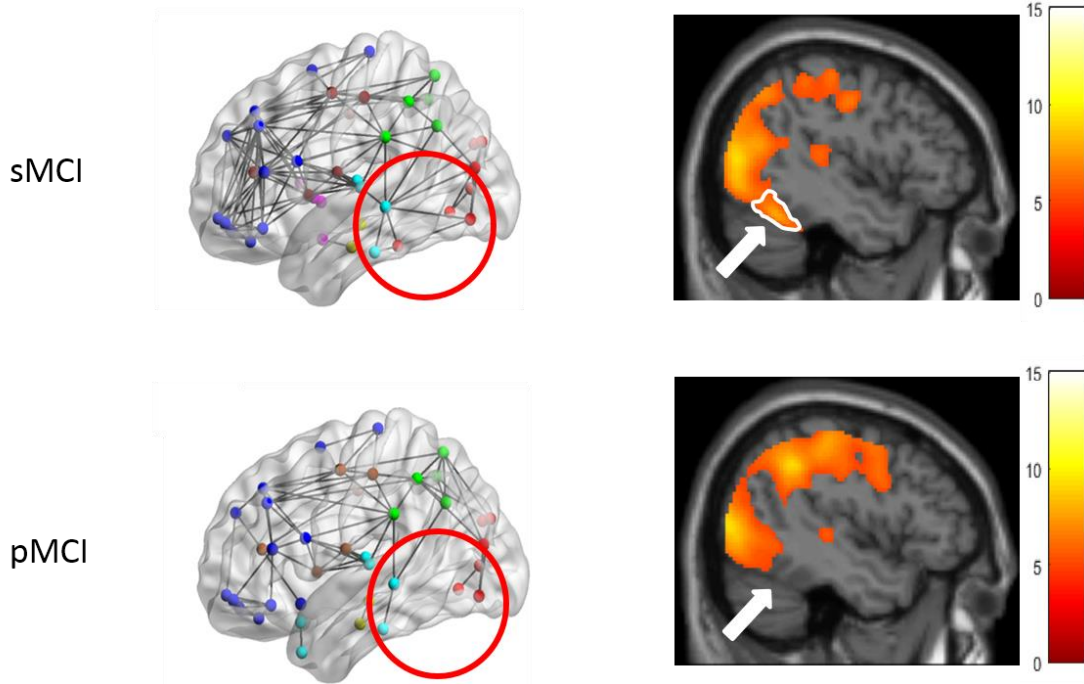


Figure S2. Comparison between regional and voxel-wise correlation analysis in temporal lobe of sMCI and pMCI. The right side showed our finding result. Another side, we used voxel-wise correlation analysis and the significance threshold: $p < 0.05$, correlation for multiple comparison (FWE with MMSE). The chosen region (red circle part) is left occipital-temporal connectivity. The white areas are temporal lobe.