Supplementary File

Title: Diet pattern analysis in Alzheimer disease implicates gender differences in folate-B12-homocysteine axis on cognitive outcomes

Supplementary Table S1. Blood profiles of the patients with Alzheimer disease

	Total		Male		Female		MW test
	Mean	SD	Mean	SD	Mean	SD	p-value
Homocysteine (µmol/L)	12.31	4.74	13.72	5.21	11.34	4.14	**<.001**
HS-CRP (mg/L)	3.24	8.13	3.27	7.59	3.22	8.49	0.559
Hemoglobin-A1C(%)	6.12	0.90	6.12	0.88	6.13	0.92	0.845
Fasting blood sugar(mg/dL)	128.77	26.52	128.94	25.28	128.64	27.40	0.943
Creatinine (mg/dL)	1.01	0.82	1.12	0.55	0.94	0.96	**<.001**
GOT (U/L)	24.54	9.46	24.42	10.36	24.63	8.82	0.459
GPT(U/L)	21.23	12.39	22.70	13.32	20.22	11.62	**0.044**
HDL-C(mg/dL)	51.57	15.16	46.34	12.75	55.23	15.65	**<.001**
VLDL-C(mg/dL)	22.50	10.87	23.40	12.09	21.87	9.92	0.428
LDL-C(mg/dL)	107.12	34.55	103.27	30.80	109.81	36.76	0.085
T-Cholesterol(mg/dL)	182.17	39.09	173.37	33.55	188.35	41.50	**<.001**
Triglyceride(mg/dL)	117.20	72.83	119.40	67.66	115.67	76.32	0.541
B12 (pg/mL)	875.57	653.57	779.54	551.16	941.97	709.24	**0.007**
Folate(pg/mL)	13.70	8.90	11.87	8.09	14.96	9.22	**<.001**
Albumin (g/dL)	4.41	0.30	4.46	0.28	4.38	0.31	**0.009**
Hemoglobin(g/dL)	13.25	1.63	14.20	1.48	12.58	1.38	**<.001**

MW test: Mann-Whitney U test
SD: standard deviation; Comparisons between male and famale gender by Mann-Whitney U test

HS-CRP: high sensitive C reactive protein; HDL-C: high density lipoprotein C; VLDL-C: very low density lipoprotein C; LDL-C: Low density lipoprotein C; GOT: Glutamic Oxaloacetic Transaminase; GPT: Glutamic Pyruvic Transaminase

Supplementary Table S2. The regression analysis for MMSE score in patients with Alzheimer disease

	Coefficient	Std. error	t value	P value	95% C.I.		VIF
					Lower limit	Upper limit	
Model for Male: adjusted R square=0.220; Durbin Watson's test statistic=1.643							
Constant	14.583	6.339	2.301	0.023			
Age	-0.125	0.057	-2.168	0.032*	-0.238	-0.011	1.241
Education	0.297	0.12	2.477	0.014*	0.06	0.533	1.234
Body mass index	0.355	0.133	2.672	0.008**	0.093	0.617	1.061
B12	0.003	0.001	3.233	0.001**	0.001	0.004	1.006
Coffee/ Tea	0.596	0.223	2.666	0.008**	0.155	1.036	1.069
Model for Female: adjusted R square=0.224; Durbin Watson's test statistic=2.055							
Constant	14.175	5.480	2.587	.010			
Age	-.090	.060	-1.497	.136	-.208	.028	1.205
Education	.528	.107	4.919	<.001***	.316	.739	1.205
Body mass index	.355	.130	2.723	.007**	.098	.612	1.128
Homocysteine	-.283	.108	-2.613	.009**	-.496	-.070	1.049
Coffee/ Tea	.789	.223	3.537	<.001***	.350	1.228	1.132

- *p<0.05, **p<0.01, ***P<0.001
- Dependent variables: mini-mental state examination (MMSE)
- Std. error: standard error
- C.I: confidence intervals
- VIF: variance inflation factor

Figure Legend:
Supplementary Figure S1:

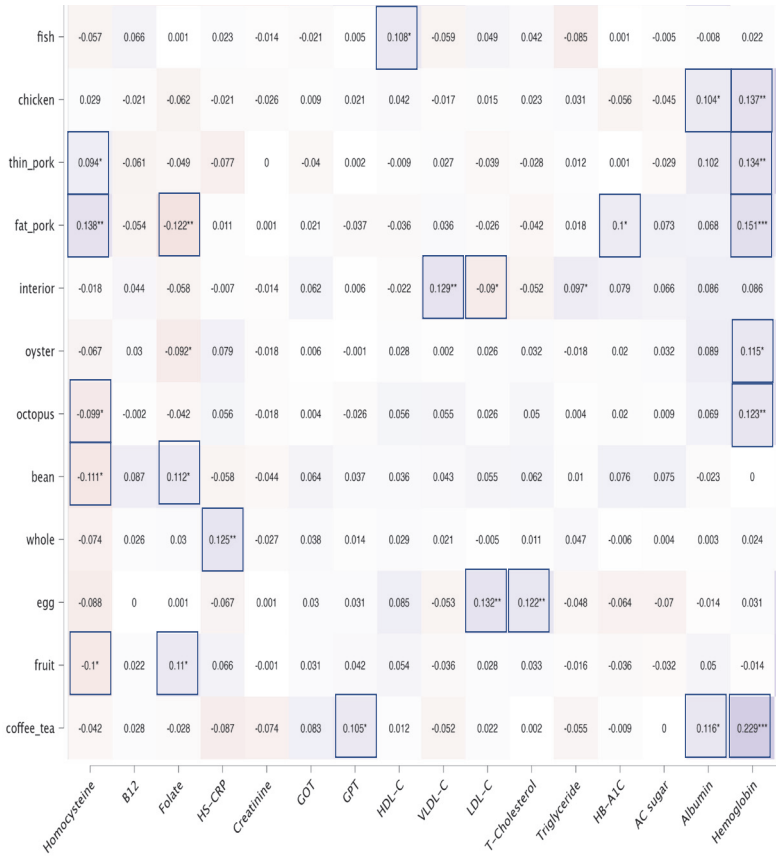

Figure Legend:
Correlation analysis heat map between blood profiles and diet pattern. Numbers indicate correlation coefficient. * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Supplementary Figure S2:

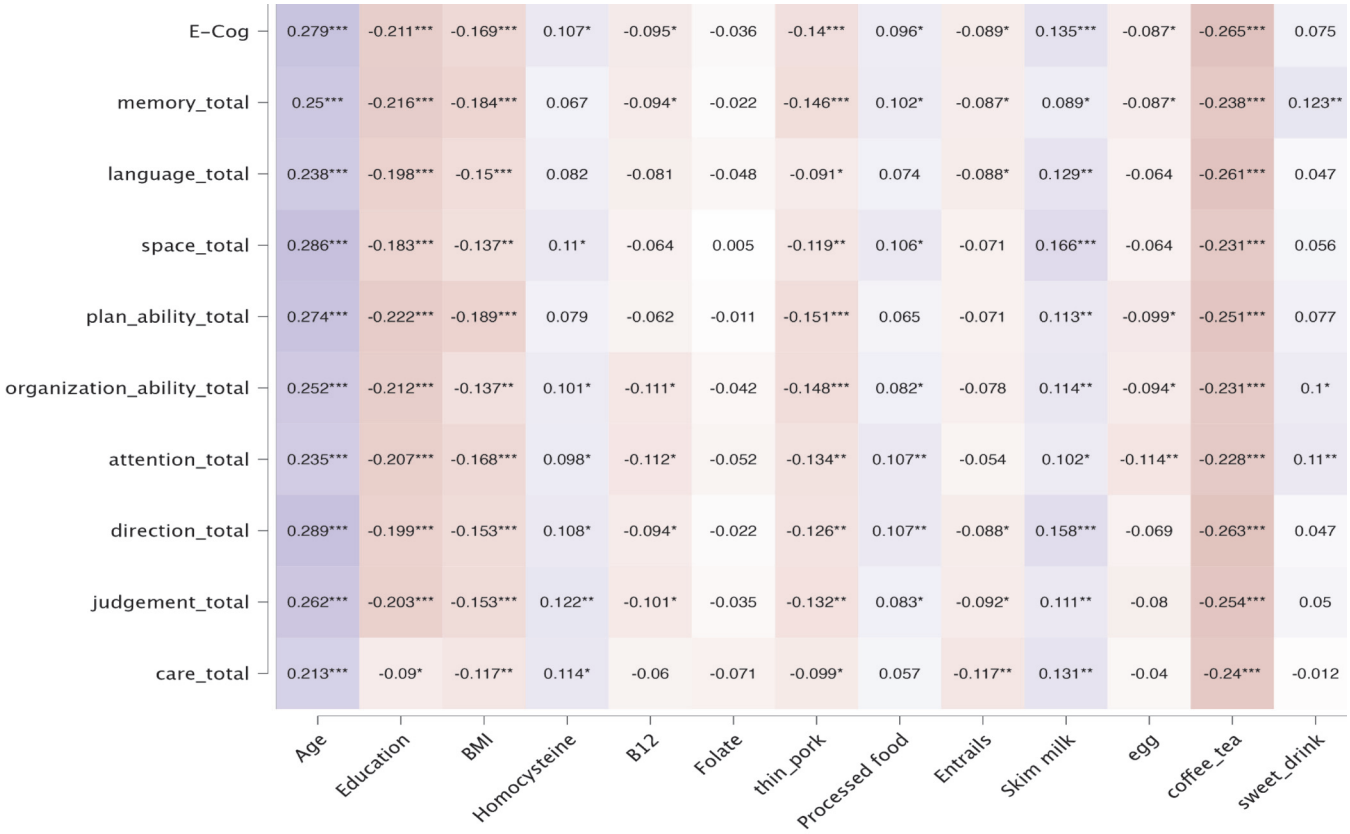

Figure Legend:
Correlation heat map between Y axis: Everyday cognition scale (and its subdomains) and X axis: demographic data, homocysteine-B12-folate axis, and diet pattern. The numbers indicated correlation coefficients. E-cog: Everyday cognition *p<0.05, **p<0.01, ***p<0.001

Supplementary Figure S3:

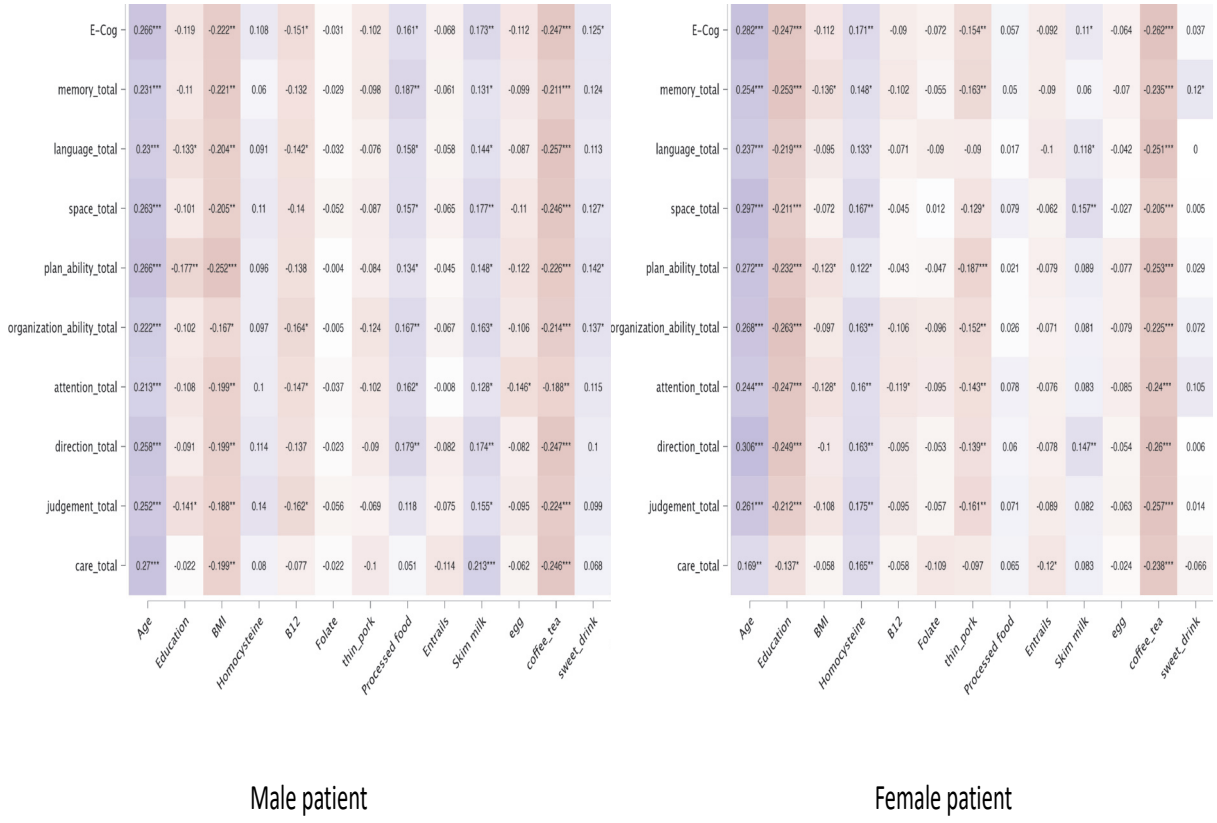

Figure Legend: Gender effect of homocysteine and B12 on Every-day Cognition (E-Cog). Correlation heat map between Y axis: Everyday cognition scale (and its subdomains) and X axis: demographic data, homocysteine-B12-folate axis, and diet pattern. The numbers indicated correlation coefficients.
*: p-value < 0.05; **: p-value < 0.01; ***: p-value < 0.001.