**Supplementary File**

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|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G total score |
| MMSE | -0.20\* | 2.01 | 0.52\* | -0.04 | -0.06 |
|  | (-0.32 to -0.08) | (-0.13 to 4.15) | (0.23 to 0.82) | (-0.07 to 0.001) | (-0.21 to 0.08) |
| CDT | -0.05\* | 0.96\* | 0.13\* | -0.01 | -0.04\* |
|  | (-0.09 to -0.02) | (0.38 to 1.55) | (0.06 to 0.21) | (-0.02 to 0.003) | (-0.08 to -0.001) |
|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G-13 total score |
| MMSE | -0.21\* | 2.01 | 0.53\* | -0.04\* | -0.02 |
|  | (-0.33 to -0.09) | (-0.14 to 4.15) | (0.23 to 0.82) | (-0.07 to -0.001) | (-0.18 to 0.14) |
| CDT | -0.06\* | 0.97\* | 0.13\* | -0.01 | -0.04 |
|  | (-0.09 to -0.02) | (0.38 to 1.56) | (0.06 to 0.21) | (-0.02 to 0.003) | (-0.08 to 0.004) |

Table S1. Coefficients of CIRS-G/ CIRS-G-13 total score on cognitive decline in GEE models

*Note.* Data are presented as beta coefficient (95% confidence interval).

Abbreviations: CDT, clock drawing test (range: 0-5); CIRS-G, Cumulative Illness Rating Scale for Geriatrics, total score (range: 0-56); CIRS-G-13, Cumulative Illness Rating Scale for Geriatrics, 13 items (omitting psychiatric illness system), total score (range: 0-52); GEE, generalized estimating equations; MMSE, Mini-Mental State Examination (range: 0-30).

\**P* < .05.

†Time: length of follow-up in months.

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|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G category |
| MMSE | -0.22\* | 2.01 | 0.52\* | -0.04\* | 0.07 |
|  | (-0.35 to -0.10) | (-0.15 to 4.16) | (0.23 to 0.82) | (-0.08 to -0.003) | (-0.27 to 0.42) |
| CDT | -0.06\* | 0.95\* | 0.13\* | -0.01 | -0.05 |
|  | (-0.10 to -0.02) | (0.36 to 1.54) | (0.06 to 0.21) | (-0.02 to 0.003) | (-0.14 to 0.05) |
|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G-13 category |
| MMSE | -0.23\* | 2.00 | 0.52\* | -0.04\* | 0.12 |
|  | (-0.35 to -0.11) | (-0.16 to 4.16) | (0.23 to 0.82) | (-0.08 to -0.004) | (-0.26 to 0.49) |
| CDT | -0.06\* | 0.95\* | 0.13\* | -0.01 | -0.05 |
|  | (-0.10 to -0.02) | (0.36 to 1.55) | (0.06 to 0.21) | (-0.02 to 0.003) | (-0.15 to 0.05) |

Table S2. Coefficients of CIRS-G/ CIRS-G-13 total number of categories endorsed on cognitive decline in GEE models

*Note.* Data are presented as beta coefficient (95% confidence interval).

Abbreviations: CDT, clock drawing test (range: 0-5); CIRS-G, Cumulative Illness Rating Scale for Geriatrics, total number of categories endorsed (range: 0-14); CIRS-G-13, Cumulative Illness Rating Scale for Geriatrics, 13 items (omitting psychiatric illness system), total number of categories endorsed (range: 0-13); GEE, generalized estimating equations; MMSE, Mini-Mental State Examination (range: 0-30).

\**P* < .05.

†Time: length of follow-up in months.

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|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G SI |
| MMSE | -0.20\* | 1.79 | 0.52\* | -0.04\* | -3.05\* |
|  | (-0.33 to -0.07) | (-0.59 to 4.16) | (0.20 to 0.85) | (-0.08 to -0.002) | (-5.05 to -1.06) |
| CDT | -0.06\* | 0.93\* | 0.13\* | -0.01 | -0.92\* |
|  | (-0.09 to -0.02) | (0.30 to 1.56) | (0.05 to 0.21) | (-0.03 to 0.001) | (-1.49 to -0.34) |
|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G-13 SI |
| MMSE | -0.21\* | 1.84 | 0.52\* | -0.04\* | -2.32\* |
|  | (-0.34 to -0.08) | (-0.54 to 4.20) | (0.20 to 0.85) | (-0.08 to -0.003) | (-4.30 to -0.33) |
| CDT | -0.06\* | 0.97\* | 0.13\* | -0.01 | -0.97\* |
|  | (-0.09 to -0.02) | (0.33 to 1.60) | (0.04 to 0.21) | (-0.03 to 0.001) | (-1.54 to -0.41) |

Table S3. Coefficients of CIRS-G/ CIRS-G-13 severity index on cognitive decline in GEE models for AD (n = 155)

*Note.* Data are presented as beta coefficient (95% confidence interval).

Abbreviations: AD, Alzheimer’s disease; CDT, clock drawing test (range: 0-5); CIRS-G, Cumulative Illness Rating Scale for Geriatrics; CIRS-G-13, Cumulative Illness Rating Scale for Geriatrics, 13 items (omitting psychiatric illness system); GEE, generalized estimating equations; MMSE, Mini-Mental State Examination (range: 0-30); SI, severity index (range: 0-4).

\**P* < .05.

†Time: length of follow-up in months.

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| --- | --- | --- | --- | --- | --- |
|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G SI |
| MMSE | -0.17\* | 2.23\* | 0.46\* | -0.05\* | -2.85\* |
|  | (-0.29 to -0.05) | (0.05 to 4.40) | (0.17 to 0.76) | (-0.09 to -0.02) | (-4.73 to -0.98) |
| CDT | -0.05\* | 1.08\* | 0.12\* | -0.02\* | -0.86\* |
|  | (-0.09 to -0.02) | (0.48 to 1.67) | (0.04 to 0.19) | (-0.03 to -0.002) | (-1.42 to -0.30) |
|  | Age (yr) | Male | Education (yr) | Time (mo)† | CIRS-G-13 SI |
| MMSE | -0.18\* | 2.26\* | 0.46\* | -0.05\* | -2.26\* |
|  | (-0.30 to -0.05) | (0.09 to 4.43) | (0.17 to 0.76) | (-0.09 to -0.02) | (-4.14 to -0.37) |
| CDT | -0.05\* | 1.11\* | 0.11\* | -0.02\* | -0.90\* |
|  | (-0.09 to -0.02) | (0.51 to 1.70) | (0.03 to 0.19) | (-0.03 to -0.003) | (-1.47 to -0.34) |

Table S4. Coefficients of CIRS-G/ CIRS-G-13 severity index on cognitive decline in GEE models for mild dementia (CDR ≤ 1, n = 164)

*Note.* Data are presented as beta coefficient (95% confidence interval).

Abbreviations: CDT, clock drawing test (range: 0-5); CIRS-G, Cumulative Illness Rating Scale for Geriatrics; CIRS-G-13, Cumulative Illness Rating Scale for Geriatrics, 13 items (omitting psychiatric illness system); GEE, generalized estimating equations; MMSE, Mini-Mental State Examination (range: 0-30); SI, severity index (range: 0-4).

\**P* < .05.

†Time: length of follow-up in months.