Figure S1. The composite score calculation method for cognitive function

$$Z_{it} = \frac{X_{it} - \overline{X}_0}{s_0}$$

i: subject, t: timepoint, Xit: score *X* for subject i at timepoint, X0: combined mean of both groups of scores at baseline s0: combined standard deviation of both groups of scores at baseline

To calculate the composite score for cognitive function, we first calculated the Z-scores for the Mini-Mental State Examination (MMSE), logical memory I and II, Free and Cued Selective Reminding Test (FCSRT), digit span, Trail-Making Test (TMT), Digit Symbol Substitution Test (DSST), and Letter Word Fluency Tests using the baseline mean and standard deviation. Z-scores were calculated using the baseline mean and standard deviation of each assessment item. The composite score is calculated as the average Z-score for each assessment item. If values were missing, the composite score was calculated using only the items that could be measured. For the TMT only, the sign was reversed because the lower the value, the better the cognitive function. The values for each evaluation item were calculated as follows: Z-scores were calculated for each item as follows:

・MMSE: Total score

・FCSRT: Total recall (sum of free and cued recall)

・Logical Memory - Immediate recall: Immediate recall total score of stories A and B,

・Logical Memory - Delayed recall: Delayed recall total score of stories A and B

・DSST: Score

・TMT-A: Duration of TMT-A (s)

・TMT-B: Duration of TMT-B (s)

・Digit Span (forward): Score

・Digit Span (backward): Score

・Letter Word Fluency Test: Number of words in the word fluency task (points)