**Supplemental Materials**

**Table 1. Intraindividual Variability on ARC Tasks**

| **Intraindividual Variability** |
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| **CDR** | **0**, N = 268*1* | **0.5**, N = 22*1* | **p-value***2* |
| **Symbols MSSD*3*** | 0.68 (2.03) | 1.08 (1.81) | 0.33 |
| **Prices MSSD** | 0.023 (0.010) | 0.019 (0.013) | 0.17 |
| **Grids MSSD** | 0.26 (0.16) | 0.31 (0.20) | 0.34 |
| *1*Mean (SD)*2*Welch Two Sample t-test*3*Mean Square of Successive Differences |

*Note.* Intraindividual variability was examined using the mean square of successive differences (MSSD) for the three different ARC tasks. There were no differences between CDR 0 and 0.5 individuals, as shown.

**Table 2. Influence of Device Supply Status on ARC and Biomarker Measures**

| **BYOD Participants vs. Participants Supplied w/ a Device** |
| --- |
|  | **BYOD**, N = 231*1* | **Device Supplied**, N = 59*1* | **p-value***2* |
| **Age** | 76.2 (5.6) | 78.3 (6.0) | 0.014 |
| **CDR** |  |  | 0.57 |
| 0 | 215 (93%) | 53 (90%) |  |
| 0.5 | 16 (6.9%) | 6 (10%) |  |
| **Prices** | 0.25 (0.06) | 0.25 (0.05) | 0.94 |
| **Grids** | 0.71 (0.26) | 0.80 (0.31) | 0.071 |
| **Symbols** | 3.24 (0.98) | 3.45 (1.03) | 0.16 |
| **AD ROI Cortical Thickness** | 2.56 (0.11) | 2.54 (0.11) | 0.23 |
| **Hippocampal Volume** | 7,770 (943) | 7,596 (919) | 0.37 |
| **Amyloid PET** | 19 (28) | 23 (32) | 0.46 |
| **Tau PET** | 1.22 (0.20) | 1.20 (0.09) | 0.31 |
| **CSF AB42** | 924 (412) | 947 (397) | 0.78 |
| **CSF Tau** | 357 (194) | 364 (169) | 0.85 |
| **CSF pTau** | 46 (26) | 46 (23) | 0.91 |
| **CSF pTau:AB42** | 0.06 (0.07) | 0.06 (0.06) | 0.95 |
| **Adherence** | 81 (17) | 83 (19) | 0.54 |
| **Tech. Frequency** | 2.57 (0.64) | 2.12 (0.67) | 0.001 |
| **Tech. Difficulty** | 2.38 (0.91) | 2.80 (0.92) | 0.011 |
| **Tech. Icon Recognition** | 84 (15) | 77 (21) | 0.032 |
| *1*Mean (SD); n (%)*2*Welch Two Sample t-test; Pearson's Chi-squared test |

*Note.* Of the 290 participants, 59 were suppled with a device in order to participate in the study. Although there were significant differences in age and technology familiarity between individuals who used their own device vs. were supplied a device, there were no differences in CDR, ARC task performance, adherence, or AD biomarkers.

**Figure 1. ARC, Conventional, and AD Biomarker Correlations in CDR 0s**



*Note.* Correlations amongst ARC and conventional measures (raw scores) and AD biomarkers. Significant correlations (*p* < 0.05) are displayed with colored circles, non-significant correlations are blank.

**Figure 2. ARC Feasibility and Conventional Measure Correlations**

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*Note.* Of the 290 participants included in the present analyses, 220 completed the technology familarity survey. Technology familiarity correlations with conventional measures are similar to those shown in Figure 5.

**Figure 3. Factors Influencing ARC Adherence**



*Note.* Of the 290 participants included in the present analyses, 220 completed the technology familarity survey (see Nicosia et al., 2021) which assessed the frequency with which participants perform smartphone-related tasks, how difficult participants find various technology-related tasks, and how well participants could recognize technology-related icons. Significant correlations (*p* < 0.05) are displayed with colored circles whereas non-significant relationships are blank. This correlogram explores various factors including cognitive ability and technology familiarity, which may influence adherence.