Erratum

Simultaneous Exercise and Cognitive Training in Virtual Reality Phase 2 Pilot Study: Impact on Brain Health and Cognition in Older Adults

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On page 118, in the second line of Table 2, next to “Characteristics”, N is incorrectly given as 2. The correction is N = 12.
Fig. 2(A–D). Main effect of Aβ-PET CLs on plasma GFAP (A-B) and plasma NfL (C-D) concentrations. All figures show standardized model-predicted plasma biomarker concentrations on the Y-axis and both linear (dashed lines) and quadratic (solid lines) associations with amyloid PET (measured in Centiloids; CLs). For plasma GFAP, Cohort 1 (A) showed a linear association between higher Aβ-PET CLs and higher plasma GFAP while Cohort 2 (B) showed a curvilinear association. Cohort 2 notably differed from Cohort 1 in the range of clinical disease stage (see Fig. 1). There were no statistically significant associations between Aβ-PET CLs and plasma NfL in either Cohort 1 (C) or Cohort 2 (D).

Fig. 3(A–D). Interaction between Aβ-PET and CDR-SB on plasma GFAP (A-B) and NfL (C–D) concentrations. All figures show standardized model-predicted plasma biomarker concentrations on the Y-axis. In both Cohort 1 (A) and Cohort 2 (B), higher Aβ-PET signal (measured in Centiloids; CLs) was associated with higher plasma GFAP in cases with CDR-SB = 0 (yellow line) but not CDR-SB = 0.5–4.0 (orange line). For cases in the dementia range (CDR-SB > 4.0, red line, Cohort 2 only), higher Aβ-PET CLs was associated with lower plasma GFAP. The Aβ-PET CLs × CDR-SB interaction was statistically significant only in Cohort 2 for plasma GFAP. These associations largely were not observed for plasma NfL (C and D) except for an apparent association of higher Aβ-PET CLs with higher plasma NfL in Cohort 2 cases with CDR-SB = 0 (Pearson’s $r = .40$).
Fig. 4. Plots depicting plasma GFAP (blue) and Aβ-PET (red) as a function of CDR-SB score. In Cohort 1, plasma GFAP was not significantly associated with CDR-SB after controlling for age and sex ($\beta = 0.189, p = 0.16$). In Cohort 2, we observed potential divergence of plasma GFAP and Aβ-PET in older adults with CDR-SB > 8.0, though the Aβ-PET data in this CDR-SB range largely was extrapolated (green box). Cohorts notably differed in representation of older adults with CDR-SB > 4.0 ($N = 0$ in Cohort 1) and in the mildest clinical disease stage (CDR-SB=0.5-1.0; gold boxes). NOTE: An additional 38 older adults from Cohort 2 with available plasma GFAP and CDR-SB (without Aβ-PET scan) were included in this plot to better represent the spectrum of clinical disease stage, particularly in the dementia range (total $N = 75$, age = $71.9 \pm 9.1$ years old, 52% female, $17.2 \pm 3.0$ years of education, 91.5% white).