**Supplementary materials**

**Supplementary Figure 1. Box plots of plasma Aβ42/Aβ40 ratio across the six platforms.**

**Supplementary Table 1. Correlations between plasma Aβ42/Aβ40 ratios across the six platforms in CU participants.**

**Supplementary Table 2. Parameters of discriminative ability of six plasma Aβ42/Aβ40 measures for Aβ-PET status in MCI.**

**Supplementary Table 3. Parameters of discriminative ability of six plasma Aβ42/Aβ40 measures for AD vs CU+MCI.**

**Supplementary Figure 2. Scatter plot of plasma Aβ42/Aβ40 ratio from WashU with PET centiloid.**

**Supplementary Figure 1. Box plots of plasma Aβ42/Aβ40 ratio across the six platforms.**



**Supplementary Table 1. Correlations between plasma Aβ42/Aβ40 ratios across the six platforms** **in CU participants.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pearson correlation | WashU | Shimadzu | Gothenburg | ADx | Quanterix | Roche |
| WashU |  | 1 | .429\*\* | .398\*\* | .559\*\* | .307\* | .529\*\* |
| Shimadzu |  | 1 | .293\* | .026 | .292\* | .065 |
| Gothenburg |  |  | 1 | .033 | .330\* | .245 |
| ADx |  |  |  |  | 1 | -.027 | .596\*\* |
| Quanterix |  |  |  |  | 1 | .402\*\* |
| Roche |  |  |  |  |  |  | 1 |

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed); \*. Correlation is significant at the 0.05 level (2-tailed).

**Supplementary Table 2. Parameters of discriminative ability of six plasma Aβ42/Aβ40 measures for Aβ-PET status in MCI.**

|  |  |  |
| --- | --- | --- |
| **Assays** | **AUC (95% CI)** | ***P*** |
| WashU | 0.860 (0.761-0.959) | <0.001 |
| Shimadzu | 0.713 (0.575-0.851) | 0.008 |
| Gothenburg | 0.613 (0.460-0.765) | 0.159 |
| ADx | 0.731 (0.590-0.873) | 0.004 |
| Quanterix | 0.550 (0.391-0.709) | 0.533 |
| Roche | 0.754 (0.616-0.892) | 0.002 |

**Supplementary Table 3. Parameters of discriminative ability of six plasma Aβ42/Aβ40 measures for AD vs CU+MCI.**

|  |  |  |
| --- | --- | --- |
| **Assays** | **AUC (95% CI)** | ***P*** |
| WashU | 0.734 (0.613-0.854) | 0.008 |
| Shimadzu | 0.723 (0.581-0.865) | 0.012 |
| Gothenburg | 0.533 (0.371-0.696) | 0.708 |
| ADx | 0.515 (0.351-0.679) | 0.869 |
| Quanterix | 0.726 (0.594-0.857) | 0.011 |
| Roche | 0.502 (0.336-0.668) | 0.978 |

**Supplementary Figure 2. Scatter plot of plasma Aβ42/Aβ40 ratio from WashU with PET centiloid.**

