eFigure 1. Flow chart showing study inclusion and exclusion criteria. The seven individuals excluded due to other dementia had progressive supranuclear palsy (PSP, n = 2), corticobasal syndrome (CBS, n = 3), or vascular dementia (n = 2). Of the 15 excluded due to quality control (QC) issues, 4 were MRI related (MR is required for the PET image analysis pipeline), 8 amyloid PET, and 3 for tau PET.
eTable 1. Number (%) of individuals in each quadrant or cluster within each clinical diagnostic group based on either established cut-points (1.48 SUVR for amyloid PET and 1.33 SUVR for tau PET) or bivariate mixture model clustering. The cluster-based groups are labelled according to amyloid (low or high) and tau (low or high). Those individuals whose values were inconsistent with one of the three clusters were labeled as other.

| Cut-point groups | CU  | MCI | AlzCS | DLB | FTD |
|------------------|-----|-----|-------|-----|-----|
| A−T−             | 680 (70%) | 76 (42%) | 4 (3%) | 15 (38%) | 17 (74%) |
| A+T−             | 242 (25%) | 51 (28%) | 10 (8%) | 17 (44%) | 2 (9%) |
| A+T+             | 40 (4%)   | 50 (27%) | 109 (89%) | 6 (15%) | 2 (9%) |
| A−T+             | 14 (1%)   | 5 (3%)   | 0 (0%)   | 1 (3%)   | 2 (9%) |

| Clustering groups | CU  | MCI  | AlzCS | DLB | FTD |
|-------------------|-----|------|-------|-----|-----|
| Low-low           | 757 (78%) | 92 (51%) | 5 (4%) | 16 (41%) | 19 (83%) |
| High-low          | 181 (19%) | 54 (30%) | 13 (11%) | 19 (49%) | 4 (17%) |
| High-high         | 6 (1%)   | 20 (11%) | 75 (61%) | 3 (8%)   | 0 (0%) |
| Other             | 32 (3%)  | 16 (9%)  | 30 (24%) | 1 (3%)  | 0 (0%) |
eFigure 2. Pairwise scatter plots of the different tau PET reporter regions of interest. Axes units are SUVR. Points are colored by clinical diagnosis. The rank-order correlation (rho) is shown at the top of each panel. Tau PET values are in SUVR units but the data is plotted on log scale which accounts for the uneven spacing.