

Introduction

AMYPAD-DPMS is a European, multicenter, study. It aims to assess clinical utility and cost-effectiveness of amyloid-PET. It recruited individuals with Subjective Cognitive Decline plus (SCD+), and syndromic diagnosis of Mild Cognitive Impairment (MCI) and dementia. Here, we describe the quantitative results of the basal amyloid PET performed in these participants.

Methods

Thus far of the 800+ subjects imaged with Amyloid PET using either 18F-florbetaben (FBB) or 18F-flutemetamol (Flut), 758 have been QC'd and quantified with AmyPype, a PET-only Centiloid-calibrated pipeline running on a GE Advantage Workstation, to render comparable estimates of global amyloid load for both tracers.

Results

The mean (SD) amyloid Centiloid value including all 758 subjects and both tracers was 45.4 (49). The SCD mean was 24.5 (39), the MCI mean was 43.6(47) and dementia was 68.8 (50.5). Figures 1 – 3 show the demographic, CL and tracer distributions.

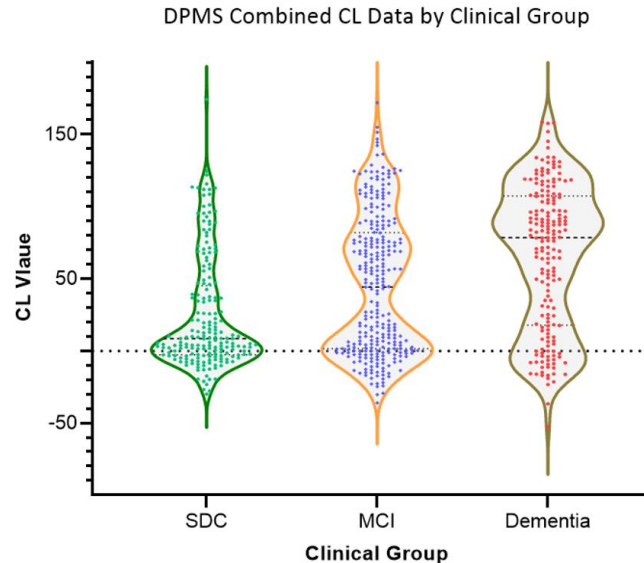


Figure 1. Combined Quantitative CL Values for SCD, MCI and dementia subjects

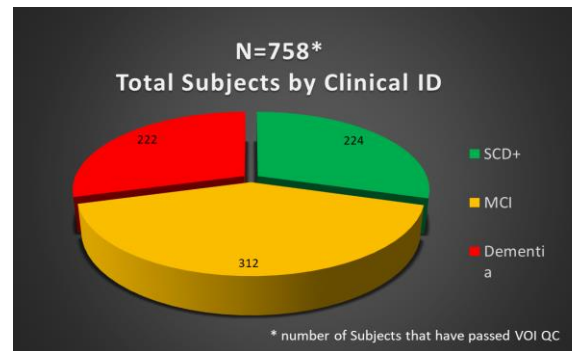


Figure 2. Clinical proportions quantified in DPMS

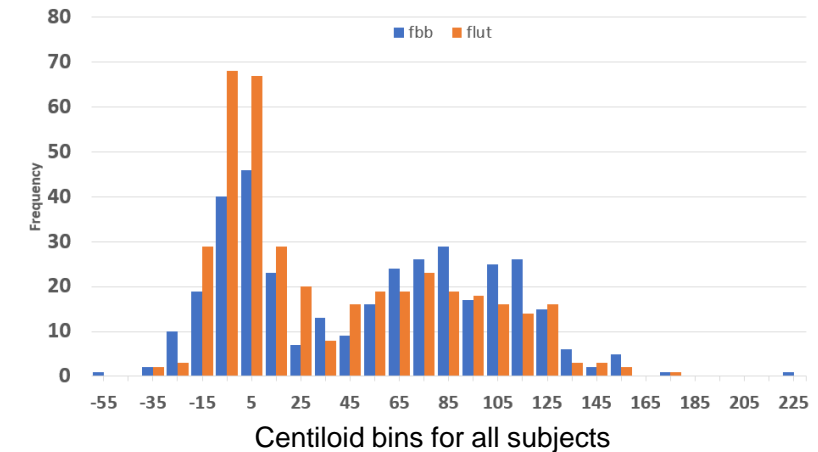


Figure 3. Centiloid value distribution for combined cohorts by FBB & Flut amyloid tracers. The distributions for both tracers have the same form. The higher number of amyloid negative subjects for Flut reflects site recruitment effects.

Conclusion

Quantitative amyloid PET in AMYPAD-DPMS shows a very well-balanced tracer use with CL values increased with increasing disease severity. The consistent distribution of the majority of CL values within/across clinical groups suggest that the Centiloid allowed the direct comparison of amyloid burden across the two tracers used.