Publishable Summary

The aim of this document is to outline the PET tracer delivery strategy as per deliverable D2.1 of the AMYPAD Description of Action (DoA). According to the DoA, this deliverable aspires to present to WP1 governance board to demonstrate efficient tracer strategy for maximal batch utilisation, image site delivery and agreement between PET tracer suppliers on country coverages and batch manufacturing failure arrangements.

AMYPAD expects to include 4100 subjects of whom approximately 50% will have a follow-up scans, for an estimated total of 6000 scans. The number of subjects will be 900 recruited for WP3 from the 8 memory clinics that are part of AMYPAD and ~3200 subjects for WP4 from the EPAD Longitudinal Cohort Study (EPAD-LCS). Crucial to performing such a high number of β-amyloid PET scans is a cost-efficient delivery of tracers to the sites as well as rigorous scanning procedures. To optimise tracer delivery, AMYPAD will use two β-amyloid PET imaging agents, florbetaben and flutemetamol (50:50 split), either as commercial or investigational product. One thousand and two hundred (1200) batches are expected to be produced in order to achieve the target figure of PET scans (5 subjects per batch, on average). Longitudinal scans will be performed with the same tracer as the baseline PET and both tracers will be equally represented in the dynamic scanning protocol, as well as in the different patient populations recruited in WP3. Tracer delivery will require a flexible approach with periodic adjustments based on efficient monitoring of dose supply to correct for deviations. For this purpose a Tracer Balancing Committee will be created to monitor actual tracer utilization and propose correction actions if needed.

For the diagnostic study (WP3) the imaging sites are anticipated to comprise centers in Amsterdam (Vumc), Edinburgh (UEDIN), Barcelona (BBRC), Geneva (UNIGE), Stockholm (KI), Toulouse (CHUT), London (UCL) and Cologne (UKK). The first wave of scanning centers for the Prognostic Study (WP4) are anticipated to be Amsterdam (Vumc), Edinburgh (UEDIN), Barcelona (BBRC), Geneva (UNIGE), Stockholm (KI), Toulouse (CHUT), and Cologne (UKK). Recruitment estimates and scanning capacity are presented for both WP3 and first-wave WP4 sites, as well as the logistics for routine operations. Estimates show that, initially, a slightly higher number of flutemetamol doses will be used but this imbalance is expected to attenuate as the project progresses. In addition, a significant capacity for tracer balance remains in the assignments for Wave 2/3 centers which are yet to be confirmed and are expected to recruit a significant amount (~50%) of the total LCS subjects.

In summary, the proposed tracer delivery strategy leverages existing processes set up for commercial supply of amyloid imaging tracers and ensures the best compromise between the required balanced tracer usage and maximum tracer delivery efficiency. As additional sites enter the study, the production network will increase enhancing the backup possibilities as the project progresses. Active monitoring of tracer usage is required to ensure the desired batch utilisation and balance between the two tracers. If deviations from the planned goals are detected, the Tracer Balancing Committee will activate contingency measures to correct for such deviations.

For more information: info@amypad.org

Acknowledgement: This project has received funding from the Innovative Medicines Initiative 2 Joint Undertaking under grant agreement No 115952. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and EFPIA.