The added value of quantitative amyloid PET in determining Alzheimer’s Disease (AD) dementia risk: the AMYPAD Prognostic and Natural History Study

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Facts & Figures

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Contributions
- IMI funding: 11,999,886 €
- EFPIA in kind: 12,233,950 €
- Other: 3,095,452 €
Total Cost: 27,329,288 €
Project website: amypad.eu
Social media: @IMI_AMYPAD

Challenge

Experimental evidence supports the relationship between Alzheimer’s Disease (AD) progression and temporal changes in biomarkers such as amyloid-β (Aβ). In fact, brain Aβ accumulation appears to be one of the earliest detectable changes in progression towards AD, being therefore considered a relevant early (preclinical) AD biomarker.

Therefore, to increase the chances of success for clinical trials of AD prevention, the AMYPAD Prognostic and Natural History Study (AMYPAD PNHS) is being conducted to provide a relevant imaging biomarker dimension and complement the phenotyping and disease modelling efforts of the European Prevention of Alzheimer’s Dementia (EPAD) Longitudinal Cohort Study (LCS).

The AMYPAD PNHS

The AMYPAD PNHS is an open label, prospective, multi-centre study linked to the EPAD LCS.

- Number of sites: up to 20 in 11 countries
- Number of participants: 2000
- Radiotracers: Neuraceq and Vizamyl
- Type of PET scan: dynamic and static
- Number of scans: 2000 baseline + 1000 follow-up

Primary objective

The primary objective is to predict progression within an AD risk probability spectrum (derived from four different dimensions: cognition, other biomarkers, traditional genetic and environmental risk factors, and changes in these dimensions) based on quantitative PET amyloid measures, with or without other biomarkers.

Value of IMI collaboration

- Sufficient scans to perform advanced statistical modeling
- Reaching several cohorts with different risk profiles
- Wide range of expertise to deliver high quality and impact

Impact & take home message

AMYPAD-PNHS will provide crucial insight into the added value of quantitative PET imaging to the assessment of Alzheimer’s Disease (AD) dementia risk in individuals without dementia, compared to a range of existing cognitive, imaging, laboratory and genetic biomarkers.

The results of the project will contribute to the determination of the optimal combination of biomarker measures to determine placement of individuals on an AD risk probability spectrum, further enabling clinical trials of AD prevention with better targeted inclusion criteria and more accurate and sensitive measures of treatment effect.