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

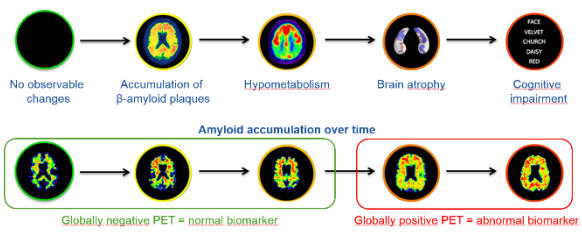
I. Lopes Alves, J. D. Gispert, G. Farrar, F. Barkhof, L. Ford, C. Ritchie, *on behalf of the AMYPAD Consortium*

Facts & Figures

Start date:	01/10/2016
End date:	30/09/2021
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.



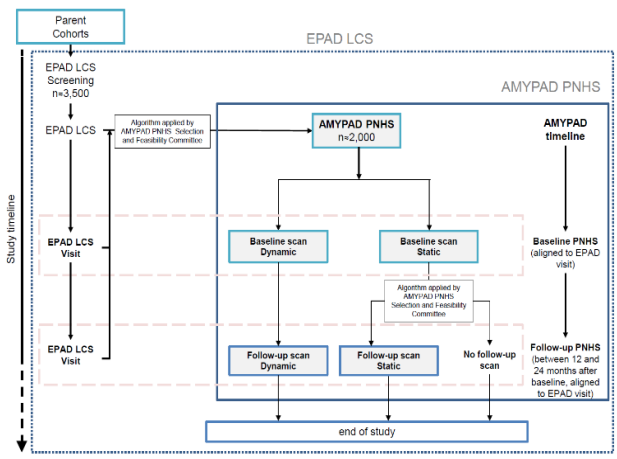
Therefore, to increase the chances of success for clinical trials of AD prevention, the AMYPAD Prognostic and Natural History Study (AMYPAD PNHS) is being conducted to provide a relevant imaging biomarker dimension and complement the phenotyping and disease modelling efforts of the European Prevention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

Study Design



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**.

This work has received support from the EU/EFPIA Innovative Medicines Initiative [2] Joint Undertaking (AMYPAD grant no 115952).