

# AI-Driven Home Screening for Alzheimer’s Disease: Early Findings From The Geneva Site Of The PREDICTOM Study



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## Introduction

**Standardized screening for Alzheimer’s disease is still lacking — PREDICTOM aims to close that gap.**

The early prediction of Alzheimer’s disease (AD) is a pressing public health priority. Although population-wide screening is well established in oncology and cardiovascular medicine, no comparable standardized approach exists for dementia. PREDICTOM was initiated to develop and validate an artificial-intelligence (AI)-driven platform for the early detection and prediction of AD.

## Aims

- Develop and validate an AI-driven, home-based screening platform for early detection of AD.
- Assess feasibility and describe the participant profile at the Geneva PREDICTOM site (Level 1).

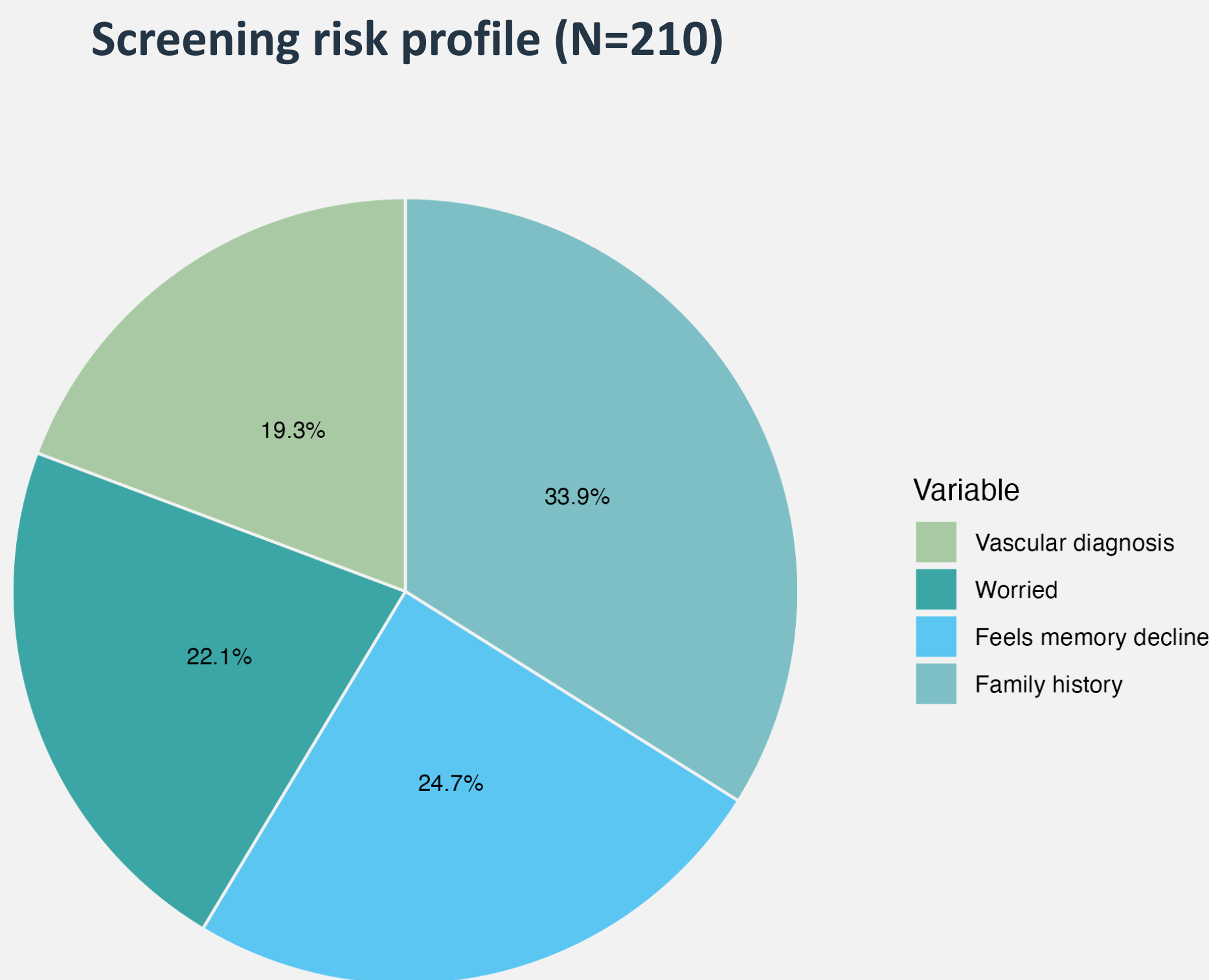
## Methods

- Observational, prospective cohort across seven European centres including Geneva (Switzerland); launched April 2025.
- Geneva recruitment via the Swiss Brain Health Registry — adults aged ≥ 50 with at least one AD risk factor.
- **3-level design:** Level 1 at-home (N = 4000) → AI risk stratification → Level 2 in-clinic (N = 415 high- / 200 low-risk) → Level 3 (N = 615).
- Here we present preliminary Level 1 (home-based) results from the Geneva site.

## Results

**A predominantly female, highly educated cohort with mainly cardiometabolic and lifestyle risk factors.**

Self-reported screening triggers are well balanced across categories; cardiometabolic and lifestyle conditions dominate the measured risk-factor profile (details below).



## Participant profile

| Characteristic             | N   | N = 210    |
|----------------------------|-----|------------|
| Age (years)                | 210 | 61 (7)     |
| Sex                        | 210 |            |
| Female                     |     | 155 (74%)  |
| Male                       |     | 55 (26%)   |
| Education level            | 210 |            |
| 1-6 years                  |     | 4 (1.9%)   |
| 7-12 years                 |     | 29 (14%)   |
| More than 12 years         |     | 177 (84%)  |
| FLAME - Memory             | 199 | 81 (6)     |
| FLAME - Executive Function | 196 | 79.1 (6.3) |
| FLAME - Global score       | 197 | 84.8 (3.1) |
| IQCODE total score         | 105 | 50.6 (4.2) |

Table 1. Participant characteristics, Geneva site (N = 210). Mean (SD); n (%).

## Key findings

- Predominantly female (74%) and highly educated (84% > 12 yrs); mean age 61.
- Family history is the most frequent screening trigger (33.9%).
- Top risk factors: hypercholesterolemia 28.1%, physical inactivity 26.2%, hypertension 25.3%.

## Conclusion

**Home-based AI screening for AD is feasible and scalable.**

These early Geneva results support large-scale digital screening for AD. Level 2 evaluations have begun and aim to validate the Level 1 findings, with recruitment continuing toward a target of 400 participants.

## Affiliations

(1) Laboratory of Neuroimaging of Aging (LANVIE), University of Geneva, Switzerland; (2) Geneva Memory Center, Department of Rehabilitation and Geriatrics, Geneva University Hospitals, Switzerland; (3) Centre for Healthy Brain Ageing, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, UK.

- To Find out more about PREDICTOM and view the project’s other posters scan the QR Code.

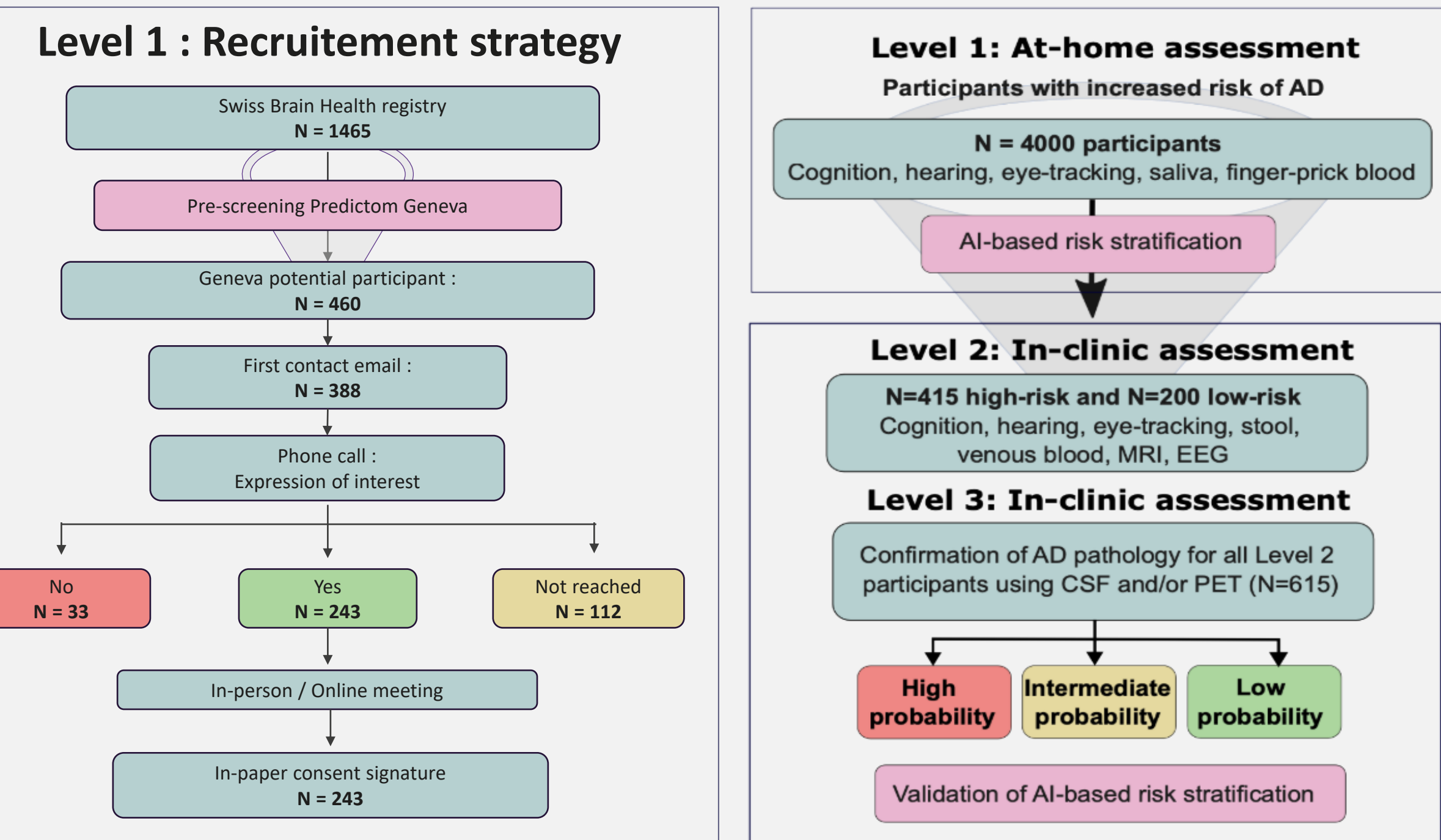
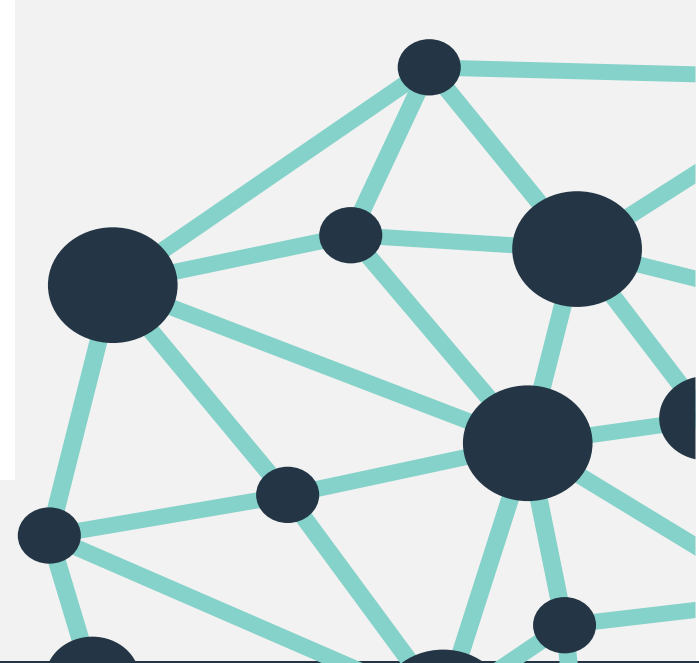


Figure 1. PREDICTOM study design — Geneva Level 1 recruitment flow (left) and the 3-level assessment across the 7 European sites (right).

