

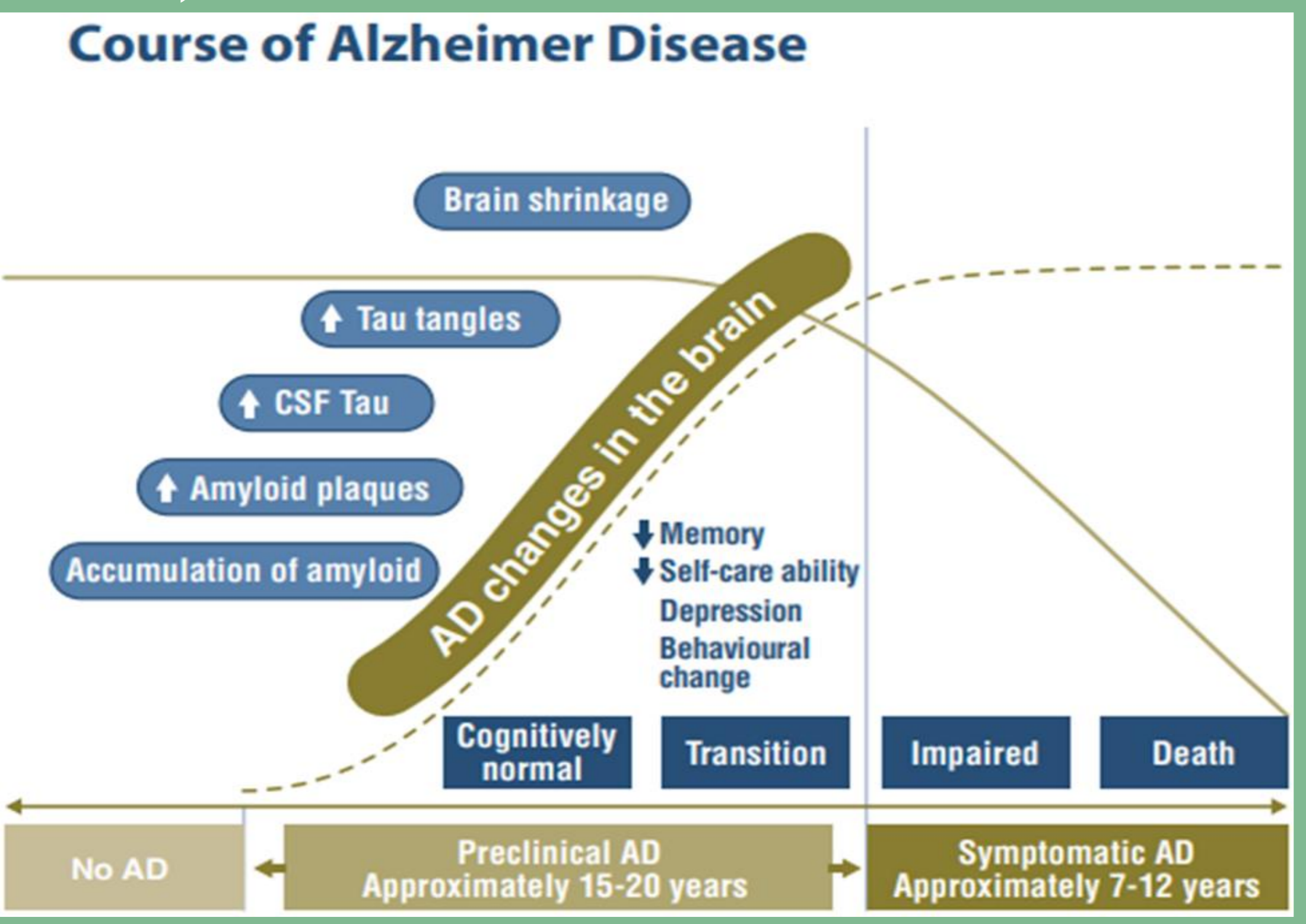
# IMPLEMENTATION AND OUTCOMES OF A REAL-WORLD PLASMA BIOMARKER-BASED SCREENING PATHWAY FOR ALZHEIMER'S DISEASE IN A MULTI-SPECIALTY CLINIC SETTING

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## • Background & Objective

The integration of plasma biomarkers into structured clinical pathways is critical for timely and accurate diagnosis of Alzheimer's disease (AD) in the era of disease-modifying therapies. A standardized screening and triage pathway was implemented across primary care, geriatrics, and neurology clinics to evaluate its utility in patient stratification and management. To assess the feasibility, diagnostic yield, and clinical impact of a multi-step AD screening pathway. This pathway combines the AD8 screening instrument with a blood-based assessment of AD pathology (plasma pTau217) and genetic risk (APOE ε4 carrier status).

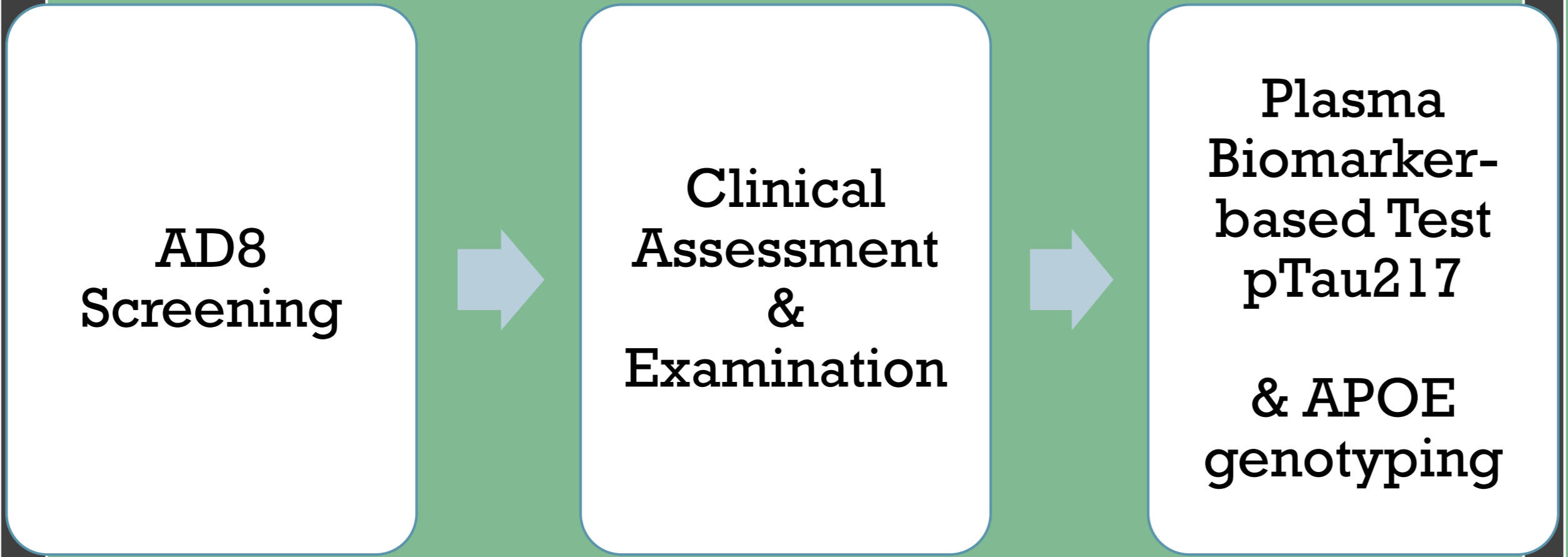


## • Methods

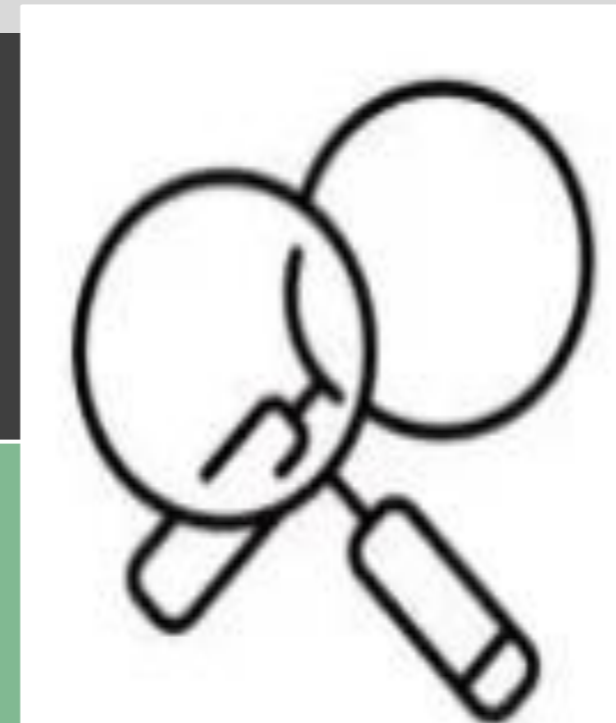
A data analysis was conducted of 60 consecutive patients enrolled in the pathway for 16 weeks from 20/8/2025 to 10/12/2025.

Eligible patients were aged 40-64 with family history or symptoms, or ≥65 years old.

The pathway included AD8 screening, clinical consultation, and the blood-based assessment (plasma pTau217 and APOE genotyping).



Results guided triage to specialist care or continued primary management. Data on demographics, AD8 scores, test results, diagnoses, imaging referrals (PET/MRI), and treatment discussions were collected and analyzed.



## • Results:

Findings	Category	Finding / Result
Demographics & Clinical	Age Distribution	70% of cohort aged 65-99 years
	Chief Complaint	Predominantly memory decline
	AD8 Screening	Administered to 45 patients (75%)
Plasma Biomarker (pTau217)	Positive	34 (57%)
	Intermediate	5 (8%)
	Normal	21 (35%)
Genetic Risk (APOE ε4)	Carrier Status	13 (22%)
	Correlation	85% of carriers were concurrently pTau217 positive
Clinical Implementation	Diagnoses Stratified	AD, MCI, and Subjective Cognitive Decline
	Therapy Barriers	Patient hesitation, cost, advanced age/comorbidities

The integrated interpretation of pTau217 levels and APOE ε4 status effectively stratified patients into distinct clinical risk categories, aiding in diagnoses of AD, MCI, and subjective cognitive decline. Disease-modifying therapy (e.g., Leqembi) was discussed with eligible patients, with major barriers being patient/family hesitation, cost, and advanced age/comorbidities.

## • Conclusion:

The implemented AD screening pathway is a feasible and effective tool for real-world patient stratification, significantly enhancing diagnostic precision beyond cognitive screening alone. The strong correlation between pTau217 positivity and APOE ε4 carrier status reinforces their combined clinical value. However, a persistent "test-and-strategy gap" highlights the need for improved patient counseling and support structures to translate biomarker and risk factor evidence into accepted, actionable treatment plans.

**早發現 · 護認知**  
Early Detection · Protect Cognition

**養和阿茲海默症**  
關注及篩查計劃  
HKSH Alzheimer's  
Awareness & Screening Programme

**篩查項目 What's Included**

**血液測試**  
pTau 217 (生物標記)  
**Blood Test**  
for pTau 217 (a biomarker)

**基因測試**  
APOE基因變異  
**Genetic Testing**  
for variant of APOE gene

**適用人士 Who Should Get Screened**

- ✓ 有家族病史  
Family history of Alzheimer's or dementia
- ✓ 有記憶問題或認知變化  
Memory issues or cognitive changes
- ✓ 關注患病風險  
Concerned about Alzheimer's risk factors

Reference :  
Day GS. Diagnosing Alzheimer Disease. Continuum (Minneapolis). 2024 Dec 1;30(6):1584-1613.