AI EEG Analysis of aMCI Probability Report

Name	Sex	Date of Birth	Test Date
Rob Howell	**Male**	**1955.08.29 (69Y)**	**2024.10.28 (UTC)**

Understanding iSyncBrain-M

iSyncBrain-M is an AI-powered screening solution for aMCI. It combines big data sets with machine learning to provide EEG-based analyses of unparalleled precision. Specially trained machine learning algorithms can process quantitative EEG to identify subtle evidence of aMCI, thus enabling early interventions that have the greatest potential for delaying or preventing the progression of aMCI to Alzheimer's disease.
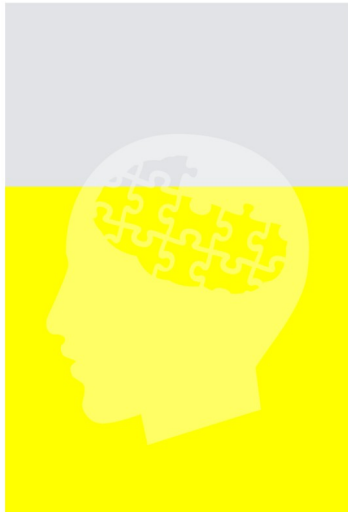
Probability of aMCI
63.9%
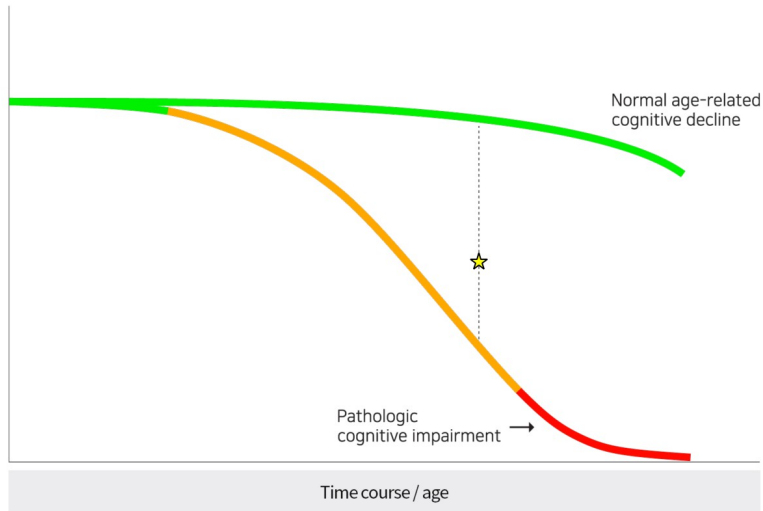
Figure. Different trajectories for normal and AD (Alzheimer's Disease) -related cognitive decline.
- Amnestic MCI (aMCI) is characterized by memory problems without severe cognitive problems, due to brain compensation in the early stages of change.
- Cognitive decline accelerates markedly in the AD stage.

Reference : US National Institute on Aging (2008). Alzheimer's Disease:unravelling the mystery. NIH Publication No. 08-3782.

*The best reasonable age range is from 50 to 85 on aMCI classifier.

This analysis indicates there is a 63.9% probability that Rob Howell has MCI.
MCI stage (based on probability range: 60-70%): 'Non-Alzheimer MCI'

Recommendation: Further assessments, e.g., SNSB, MRI, amyloid PET, and regular examination by a physician within 3 months.

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Five stages of iSyncBrain-M

stage1 **~ 50%** **Normal**

Recommendation: Follow these tips to help Rob Howell maintain 'Normal' brain status.

Tips for Brain Health:

1. Improve Memory: Develop a habit of memorizing simple things. For example, begin with memorizing phone numbers.
2. Improve Connectivity: Read to stimulate the brain. Regular reading stimulates connectivity of brain regions and enhances learning capacity.
3. Improve Adaptiveness: Challenge new things by getting out of your comfort zone. There is great capacity for discovery and renewal when we approach familiar situations in new ways, going beyond complacency.

physical exam needed in

one year

stage2 **50~60%** **Preclinical MCI**

Recommendation: Further assessments, e.g., SNSB, MRI, amyloid PET, and regular examination by a physician within 6 months.

physical exam needed in

6 month

stage3 **60~70%** **Non-Alzheimer MCI**

Recommendation: Further assessments, e.g., SNSB, MRI, amyloid PET, and regular examination by a physician within 3 months.

physical exam needed in

3 month, F/U

stage4 **70~85%** **Prodromal Alzheimer MCI**

Recommendation: A possible SNSB, MRI, Amyloid PET, monitoring through regular examination and Doctor's diagnoses within 3 months is recommended.

physical exam needed in

3 month, F/U

stage5 **85%~** **Alzheimer's Disease Dementia**

Recommendation: A possible SNSB, MRI, Amyloid PET, monitoring through regular examination and Doctor's diagnoses within 3 months is recommended.

physical exam needed in

3 month, F/U