QUICK GUIDE

iSyncBrain® AI Predictors

QEEG AI algorithms for screening brain function and cognitive decline

iMediSync

01 5 Indicators of Brain Function

Depression
83%
EC+EO (76% with EC alone). AI trained on 276 individuals with diagnosed MDD

Anxiety
88%
AI trained on 481 individuals with diagnosed GAD

Stress
87%
AI trained on 176 individuals at various stages of stress

Brain Speed
APF
Based on alpha-peak frequency — the speed of the brain

ADHD
TBR
Based on an elevated theta/beta ratio

M1 MCI Classifier

KFDA CERTIFIED SAMD

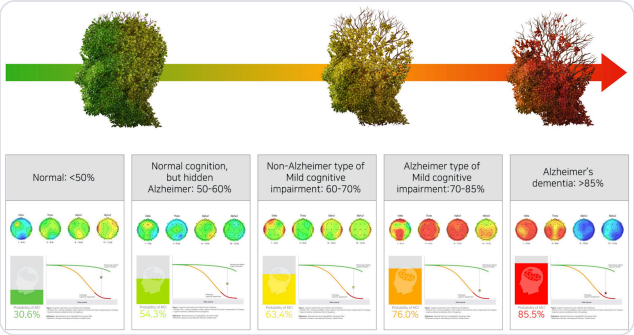
QEEG AI algorithm for early detection of aMCI or preclinical Alzheimer's disease dementia (ADD).

91%	90%	93%	95%
Accuracy	Specificity	Sensitivity	AUC

CLINICAL VALIDATION SAMPLE

Normal	326
aMCI	103
Total	**429**

Validated with Chung-Ang University Hospital, Seoul National University Bundang Hospital and Kangwon National University Hospital.



M2 Amyloid Detector

VALIDATED AGAINST AMYLOID PET

PET-validated EEG machine-learning algorithm that estimates risk of amyloid pathology in pre-dementia Alzheimer's disease. Reports four aMCI stages, built on a newly collected **1,944-person** dataset.

Stage 2	40–50%	**Normal cognition** — beta-amyloid suspected
Stage 3	50–60%	**Normal cognition** — mixed pathology (beta-amyloid and/or Lewy bodies) suspected
Stage 6	80–85%	**MCI** — mixed pathology (Alzheimer's + Lewy body) suspected
Stage 8	90%+	**Mixed dementia** — Alzheimer's + Lewy body

90%	85%	75%
Abnormal vs normal	Dementia vs MCI	Pathology presence

Why pathology matters: pure AD and AD with Lewy bodies follow different clinical progressions (Pillai et al., 2016; Beach & Malek-Ahmadi, 2021).

Kim et al., 2023 · Scientific Reports

* AI screening predictors, including aMCI classification and staging, are not FDA cleared or approved; for investigational, research and educational use only — not a diagnosis. iSyncWave EEG recording and analysis is FDA 510(k) cleared (K220056).