

Supplementary Material

Early identification of Mild Cognitive Impairment using multi-modal digital assessments

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References

1. Butler PM *et al. Nature Med.* 2025;31:829–39.
2. Nathan PJ *et al. Neurobiol Aging.* 2017;53:1–10.
3. Campos-Magdaleno M *et al. Psychol Med.* 2021;51:2465–2475.
4. Robin J *et al. Front. Digit. Health.* 2021;3:749758.
5. Spilka MJ *et al. Alzheimer's Dement.* 2025;21:e103297.

Supplementary methods

- Participants diagnosed with Mild Cognitive Impairment met the following criteria:
 - Mini-Mental State Examination score of 24–30
 - Rey Auditory Verbal Learning Test score of at least 1 standard deviation below the mean score
 - Minimal to mild functional impairment but with preservation of independence in functional abilities based on the Functional Activities Questionnaire score or study partner report.

Supplementary tables

Table S1. Output of the LASSO regression analysis for the speech features

Variable	Lambda.1se coefficient
Average word length	−0.07
Global coherence	0.04
Content unit	−0.05
Object unit	−0.02
Average loudness	−0.05
Lexical diversity	−0.21