in brief
for healthcare professionals

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New Diagnostic Criteria and Guidelines for Alzheimer's Disease

Expert workgroups spearheaded by the Alzheimer's Association and the National Institute on Aging of the National Institutes of Health have developed new criteria and guidelines for the diagnosis of Alzheimer's disease which are now available online through the *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*.
Go to alz.org/detectionDX for more information.

The new criteria and guidelines include recommendations for clinical office settings and research settings as illustrated by the following Summary Table.

Summary Table. Criteria and Guidelines for Alzheimer's Disease

Clinical Use Research Use

	Stage of Alzheimer's Disease	*Tests/Criteria*	*Clinical or Research Use*
Intro	Introduction (Jack et al, 2011)	Notable differences from 1984 NINCDS-ADRDA criteria include formulation of 3 AD stages and inclusion of biomarkers.	Broad consensus that use of biomarkers must be validated and standardized before routine clinical application.
Dementia due to AD	Dementia due to Alzheimer's Disease (McKhann et al, 2011) Includes 3 sets of criteria: 1. Probable AD dementia	1. Probable AD dementia (core clinical criteria) – includes meeting the clinical criteria for all-cause dementia along with insidious onset; clear history of worsening of cognition by report or observation; and initial and most prominent cognitive deficits include amnestic presentation and/or deficits in language presentation, visuospatial presentation and executive function.	1. Probable AD dementia criteria retained the framework of the 1984 NINCDS-ADRDA criteria and can be used in the clinical setting.
	2. Possible AD dementia	2. Possible AD dementia – diagnosis for patients who meet core clinical criteria but exhibit an atypical course of cognitive decline or mixed etiological presentation.	2. Possible AD dementia criteria can be used in the clinical setting. Any patient with previous possible AD dementia per the 1984 NINCDS-ADRDA criteria should be reevaluated with the updated criteria.
	3. Probable AD dementia with evidence of AD pathophysiology	3. Probable AD dementia with evidence of AD pathophysiology – diagnosis for patients who meet the core clinical criteria and incorporate biomarkers, advanced imaging and evaluation of biochemical changes.	3. It is not recommended to use biomarker tests for routine AD diagnosis. If undertaken, biomarker evidence may increase the certainty that clinically assessed dementia is due to the AD pathological process.

Summary Table. Criteria and Guidelines for Alzheimer's Disease (continued)

Clinical Use Research Use

	Stage of Alzheimer's Disease	*Tests/Criteria*	*Clinical or Research Use*
MCI due to AD	Mild Cognitive Impairment due to Alzheimer's Disease (Albert et al, 2011) Includes 2 sets of criteria: 1. Core clinical criteria	1. Core clinical criteria - clinical and cognitive assessments that establish concern of change in cognition over time; impairment in 1 or more cognitive domain; preservation of independence in functional abilities; not demented, and etiology of MCI consistent with AD, including where relevant, AD genetic factors.	1. Core clinical criteria can be used in clinical settings.
	2. Research criteria	2. Research criteria – incorporates biomarkers, advanced imaging and evaluation of biochemical changes with probabilistic framework for levels of certainty for MCI due to AD.	2. Research criteria established solely for the purpose of research. Workgroup noted that prior to use in community settings, validation of biomarker criteria and standardization of biomarker analyses must occur.
Preclinical	Preclinical (Sperling et al, 2011) A new conceptual phase to encompass individuals with pathophysiological changes in the brain but are cognitively normal (no evidence of dementia or mild cognitive impairment).	Preclinical criteria incorporates biomarkers /advanced imaging. Measure of Aβ accumulation (CSF Aβ42 and PET imaging with amyloid tracer). Measure of neuronal injury (CSF tau/p-tau, FDG-PET/fMRI, and sMRI).	Preclinical criteria established solely for the purpose of research. This is a conceptual model and is not meant to imply that all individuals with early AD pathology will progress to clinical AD dementia.

Abbreviations: Aβ = amyloid beta; AD = Alzheimer's disease; CSF = cerebral spinal fluid; FDG = fluorodeoxyglucose; fMRI = functional magnetic resonance imaging; MCI = mild cognitive impairment; MRI = magnetic resonance imaging; PET = positron emission tomography; NINCDS-ADRDA = criteria for the clinical diagnosis of AD published in 1984 by the National Institutes of Neurologic and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Association workgroup; sMRI = structural magnetic resonance imaging

References

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