Quest Diagnostics®

Primary care is the first line of defense against cognitive decline, including Alzheimer's disease

Today, you can help patients better understand their long-term brain health. **Integrating blood-based biomarker testing with existing cognitive tools** can help you with a comprehensive risk assessment approach.

You can help address a #1 health fear by assessing risk earlier

1/3 **of retirees fear Alzheimer's disease (AD)** more than cancer, heart attack, stroke, or contagious diseases[1]

78% of adults want to **detect AD risk as part of preventive care**[2]

20+ Changes in the brain can begin up to **20 years before symptoms appear**[3]

There are indicators to help determine who might benefit from assessment[4]

Outside of family history, for those who meet certain "other" conditions, an annual evaluation can provide an opportunity to get a clearer picture of risk.

Risk is cumulative, increasing as 1 or more indicators are present

Comorbidities*

- Diabetes
- Hypertension
- Low blood pressure
- Obesity
- Chronic kidney disease

Symptoms of cognitive decline

Description of impaired memory or change in thinking

Age

The most dynamic changes to amyloid buildup occur between ages 50-59, and current recommendations are to begin testing at age 55+[5]

*Conditions associated with increased neurodegeneration.

An integrated approach to AD assessment

Combining cognitive assessments and insights from blood-based biomarker testing allows you to balance clinical evaluations with objective data.

87% of physicians believe blood tests will become the standard of care.[2]

Empower patients to take an active role in their care

Understanding risk of AD earlier allows patients and providers to take action and make decisions for their future. This can include decisions regarding their future like:

- Building a care team
- Making financial preparations
- Legal planning
- Navigating care decisions regarding lifestyle changes, additional testing, clinical trials, or treatment

Blood-based testing can uncover microscopic changes in the brain

AD biomarkers, such as amyloid beta (Aβ) and phosphorylated tau (p-tau), **may be increasing for years while cognitive impairment is not yet significant** enough to be observed through clinical assessment tools such as mini-mental state examinations (MMSE) or other cognitive assessment questionnaires.

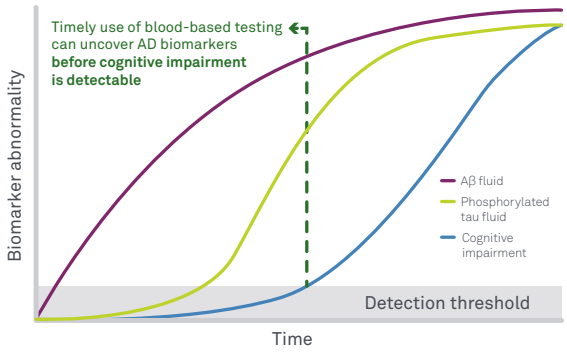

Chart adapted from Jack CR Jr. *Lancet Neurol.* 2022;21:800-809. doi:10.1016/S1474-4422(22)00298-8 and Long et al, *Cell*, 2019; 179-2: doi:10.1016/j.cell.2019.09.001

Utilizing multiple biomarkers can provide a more informed view of AD risk[6,7]

Testing with plasma Aβ42/40 ratio can reduce unnecessary testing like PET or CSF by 40%,[8] and using amyloid and tau (AT) profile combinations can provide even more information to help guide care decisions.

Assess AD risk with the Quest AD-Detect portfolio

Test code	Test name	Test use
11786	**Quest AD-Detect® Beta-Amyloid 42/40 Ratio, Plasma**	Detect Aβ levels, one of the earliest biomarkers associated with AD risk.[9] Levels can be monitored over time.
13690	**Quest AD-Detect® Phosphorylated tau181 (p-tau181), Plasma**	Uncover the presence of p-tau181 proteins, one of the key biomarkers involved in the diagnosis and staging of AD.[7] Levels can be monitored over time.
13825	**Quest AD-Detect® Phosphorylated tau217 (p-tau217), Plasma**	Determine levels of p-tau217 proteins, a dynamic and specific biomarker to aid in differentiating AD from other neurocognitive diseases.
12563	**Quest AD-Detect® Apolipoprotein E (ApoE)**	Assess ApoE isoforms to help determine hereditary AD risk.[9]

Learn how our AD-Detect portfolio can help you assess patient risk of Alzheimer's earlier.
Visit QuestADrisk.com

References
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2. Quest Diagnostics. *The Coming Alzheimer's Disease Healthcare Revolution US Physician and Adult Perspectives on the Future of Diagnostics and Treatment*. May 2022. Accessed July 1, 2024. https://www.questdiagnostics.com/content/dam/corporate/brochure-pdfs/The-Coming-Alzheimer%27s-Disease-Healthcare-Revolution-Survey-Report.PDF 3. Vermunt L, Sikkes SAM, van den Hout A, et al. Duration of preclinical, prodromal, and dementia stages of Alzheimer's disease in relation to age, sex, and APOE genotype. *Alzheimers Dement*. 2019;15(7):888-898. doi:10.1016/j.jalz.2019.04.001 4. Yu J-T, Xu W, Tan C-C, et al. vidence-based prevention of Alzheimer's disease: systematic review and meta-analysis of 243 observational prospective studies and 153 randomised controlled trials. *J Neurol Neurosurg Psychiatry.* 2020;91(11):1201-1209. doi:10.1136/jnnp-2019-321913 5. Schindler, SE, Galasko, D, Pereira, AC et al. Acceptable performance of blood biomarker tests of amyloid pathology—recommendations from the Global CEO Initiative on Alzheimer's disease. *Nat Rev Neurol.* Published online June 12, 2024. doi:10.1038/s41582-024-00977-5 6. Lantero Rodriguez J, Karikari TK, Suárez-Calvet M, et al. Plasma p-tau181 accurately predicts Alzheimer's disease pathology at least 8 years prior to postmortem and improves the clinical characterisation of cognitive decline. *Acta Neuropathol*. 2020;140(3):267-278. doi:10.1007/s00401-020-02195-x 7. Brickman AM, Manly JJ, Honig LS, et al. Plasma p-tau181, p-tau217, and other blood-based Alzheimer's disease biomarkers in a multi-ethnic, community study. *Alzheimers Dement*. 2021;17(8):1353-1364. doi:10.1002/alz.12301 8. Weber DM, Taylor SW, Lagier RJ, et al. Clinical utility of plasma Aβ42/40 ratio by LC-MS/MS in Alzheimer's disease assessment. *Front Neurol*. 2024;15:1364658. doi:10.3389/fneur.2024.1364658 9. Nakamura A, Kaneko N, Villemagne V, et al. High performance plasma amyloid-B biomarkers for Alzheimer's disease. *Nature*. 2018;554(7691):249-254. doi:10.1038/nature25456

Test codes may vary by location. Please contact your local laboratory for more information.

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