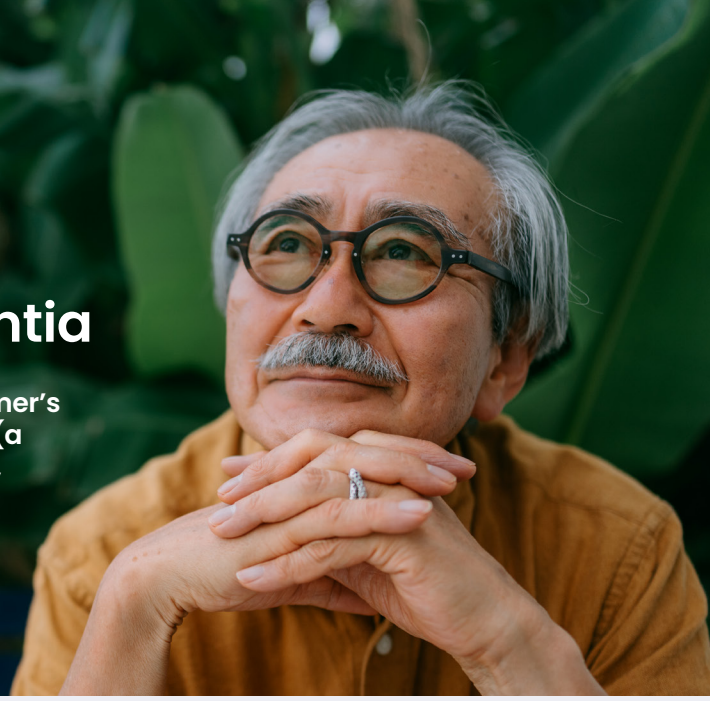

Inspiring action against Alzheimer's disease and dementia

In 2020, approximately 368,200 people were living with Alzheimer's disease in Canada, and this will increase to over 1.1 M by 2050 (a 203% increase from 2020)[1]. As these numbers continue to grow, access to testing is essential. If patients at risk of developing dementias—including Alzheimer's disease (AD)—are identified in the early stages of disease, possible interventions could then be evaluated when they might be most effective.[2]

Navigate Alzheimer's disease and dementia testing with our expansive portfolio.

LifeLabs® is providing a portfolio of blood-based risk assessment offerings that can help provide a better understanding of a patient's potential risk for Alzheimer's disease. Minimally invasive, blood-based biomarker testing offers a promising pathway to transforming patient care, as it may enable earlier risk assessment, diagnosis, staging, and timely management.[2]

Blood-based testing

LifeLabs® Beta-Amyloid 42/40 Ratio

Evaluate ratio of beta-amyloid 40 and 42 within plasma, one of the earliest biomarkers associated with AD.[3]

Test use: Patients showing mild cognitive impairment where AD is suspected.

LifeLabs® Phosphorylated tau181 (p-tau181)

Determine levels of p-tau181 proteins, a diagnostic biomarker that is useful in predicting the cognitive decline in AD/MCI patients and correlates with amyloid and tau PET results.[7,8]

Test use: Patients showing mild cognitive impairment where AD is suspected.

LifeLabs® Phosphorylated tau217 (p-tau217)

Determine levels of p-tau217 proteins, a dynamic and specific biomarker to aid in differentiating AD from other neurodegenerative diseases.[4,5]

Test use: Patients showing mild cognitive impairment where AD is suspected.

LifeLabs® Neurofilament Light Chain (NfL)

Determine levels of NfL to assess neuronal damage from neurodegenerative diseases, such as AD and multiple sclerosis, and traumatic brain injuries like those caused by concussions. [9,10]

Test use: Patients showing cognitive impairment where neuronal injury or neurodegeneration are suspected.

LifeLabs® Apolipoprotein E (ApoE) Isoform

Identify presence of ApoE isoforms within plasma, a strong genetic risk factor associated with AD, as well as risk of amyloid-related imaging abnormalities (ARIA).[6]

Test use: One-time assessment for patients who may have a family history of late-onset AD.

LifeLabs® ABeta 42/40 and p-tau217 Evaluation

Evaluates plasma Aβ42/40 ratios and p-tau217 levels reporting out the likelihood that a symptomatic patient suspected of AD has a High, Indeterminant, or Low likelihood of amyloid pathology consistent with AD.[11]

Test use: Patients showing mild cognitive impairment where AD is suspected.

Transforming the patient journey with cognitive health testing

LifeLabs® is proud to offer one of the most comprehensive cognitive health testing portfolios in the industry, ensuring you have the insights you need to facilitate an informed risk assessment and diagnosis.

Test code (ON)	Test name	Turnaround time	Specimen type
5639	LifeLabs® Beta-Amyloid 42/40 Ratio, Plasma	12 days	Blood
5637	LifeLabs® Phosphorylated tau217 (p-tau217), Plasma	10 days	Blood
5638	LifeLabs® Apolipoprotein E (ApoE), Plasma	12 days	Blood
5640	LifeLabs® Phosphorylated tau181 (p-tau181), Plasma	10 days	Blood
5641	Neurofilament Light Chain (NfL), Plasma	9 days	Blood
5089	ABeta 42/40 and p-tau217 Evaluation, Plasma	10 days	Blood

For more information on these tests, including detailed collection and transport requirements, visit **tests.lifelabs.com/s/**

As an industry leader, we're committed to advancing the science behind AD that can transform care pathways and outcomes for patients with cognitive health conditions.

See how our testing portfolio supports you and your patients along the Alzheimer's disease and dementia care pathway at

LifeLabs.com/alzheimers-disease

Click here to download requisition.

To receive the latest news and updates from LifeLabs, please join our email list by clicking the 'sign up' button.

Sign up

Patient sex, environment, and presence of other risk alleles also contribute to the risk of AD associated with ApoE genotype; determination of possible associations based on ethnic background or heritage needs further study.[6]

References

1. Alzheimer's Society of Canada. Report 1: Navigating The Path Forward for Dementia in Canada. 2022. https://alzheimer.ca/sites/default/files/documents/Landmark-Study-Report-1-Path_Alzheimer-Society-Canada_0.pdf 2. Hampel H, Hu Y, Cummings J, et al. Blood-based biomarkers for Alzheimer's disease: Current state and future use in a transformed global healthcare landscape. Neuron. 2023;111(18):2781-2799.doi:10.1016/j.neuron.2023.05.017 3. 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 4. 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 5. Ashton NJ, Brum WS, Molfetta GD, et al. Diagnostic accuracy of a plasma phosphorylated tau 217 immunoassay for Alzheimer disease pathology. JAMA Neurol. 2024;81(3):255-263. doi:10.1001/jamaneurol.2023.5319 6. Farrer LA, Cupples LA, Haines JL, et al. Effects of age, sex, and ethnicity on the association between apolipoprotein E genotype and Alzheimer disease: a meta-analysis. JAMA. 1997;278(16):1349-1356. doi:10.1001/jama.1997.03550160069041 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. 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 post-mortem and improves the clinical characterisation of cognitive decline. Acta Neuropathol. 2020;140(3):267-278. doi: 10.1007/s00401-020-02195-x 9. Khalil M, Teunissen CE, Lehmann S, et al. Neurofilaments as biomarkers in neurological disorders — towards clinical application. Nat Rev Neurol. 2024;20(5):269-287. doi:10.1038/s41582-024-00955-x 10. Ashton NJ, Janelidze S, Khleifat AA, et al. A multicentre validation study of the diagnostic value of plasma neurofilament light. Nat Commun. 2021;12(1):3400. doi:10.1038/s41467-021-23620-z 11. 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. 2024;20(7):426-439. doi:10.1038/s41582-024-00977-5

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