

## ADmark<sup>®</sup> Phospho-Tau/ Total Tau/A $\beta$ 42 Analysis and Interpretation is now available from Quest Diagnostics

The combination of these 3 biomarkers enables a more accurate diagnosis of Alzheimer's disease



It's essential to have a set of biomarkers **that discriminates Alzheimer's disease (AD) from other forms of dementia**. The biomarker P-tau181 fulfills the proposed criteria for differentiation of AD and non-AD, and particularly of AD and frontotemporal dementia (FTD).<sup>1</sup>

In patients presenting with mild cognitive impairment (MCI), cerebrospinal fluid (CSF) assessment of beta amyloid (A $\beta$ 42), total tau (t-tau), and phosphorylated tau (p-tau) has shown strong clinical utility<sup>2,3</sup>:

### Predicting progression from MCI to AD

SENSITIVITY

95%

SPECIFICITY

87%

### Diagnosis of autopsy- confirmed AD

SENSITIVITY

94%

SPECIFICITY

90%

### Differentiating AD from other types of dementia

SENSITIVITY

88%

SPECIFICITY

100%

## The Alzheimer's Association has published appropriate-use criteria for CSF biomarkers in the diagnosis of AD

Some of these appropriate indications include patients with<sup>4</sup>:



Subjective cognitive decline who are considered to be at risk for AD



Persistent, progressing, and unexplained MCI



Symptoms that suggest possible AD



Core criteria for probable AD with typical age of onset

The CSF biomarkers A $\beta$ 42, t-tau, and p-tau reflect the core components of AD pathology in line with the research framework provided by the National Institute on Aging–Alzheimer's Association (NIA-AA).<sup>5</sup>

CSF BIOMARKER	AD SIGNATURE
$\beta$ -Amyloid Protein 1-42	↓ Low
Total Tau Protein	↑ High
Phosphorylated Tau Protein	↑ High

CSF tau/A $\beta$ 42 ratio is able to predict future dementia in cognitively normal adults<sup>6</sup>

## Quest can help you provide a clinically relevant differential diagnosis of Alzheimer's disease

TEST CODE	TEST NAME	SPECIMEN VOLUME <sup>a</sup> /TUBE TYPE	SETUP/ANALYTIC TIME
92433	ADmark <sup>®</sup> Phospho-Tau, Total-Tau, A $\beta$ 42 CSF Analysis & Interpretation (Symptomatic)	2 mL CSF, polypropylene tube	7-14 days

<sup>a</sup> CSF must be collected in a polypropylene tube. Glass and polystyrene are not acceptable. CSF should be shipped on a cold pack or frozen on dry ice. Whole blood samples should remain room temperature.



Learn more →

### References

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- Shaw LM, Arias J, Blennow K, et al. Appropriate use criteria for lumbar puncture and cerebrospinal fluid testing in the diagnosis of Alzheimer's disease. *Alzheimers Dement*. 2018;14(11):1505-1521. doi:10.1016/j.jalz.2018.07.220
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- Fagan AM, Roe CM, Xiong C, et al. Cerebrospinal fluid tau/beta-amyloid (42) ratio as a prediction of cognitive decline in nondemented older adults. *Arch Neurol*. 2007;64(3):343-349. doi:10.1001/archneur.64.3.noc60123

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

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