

Value of Diagnostics within Women's Health: Alzheimer's Disease



~6.7 million adults in the U.S. are living with Alzheimer's disease— 2/3 are women

Alzheimer's disease – the most common form of dementia among adults 65 years and older – is a progressive neurological disorder that affects memory, thinking, reasoning, and behavior.

Although exact causes remain unknown, a key characteristic of Alzheimer's disease is the accumulation of beta amyloid plaques and tau fiber tangles within the brain. Eventually, these protein buildups affect brain cells' ability to function and survive.

Adults Living with Alzheimer's Disease (ages 65 and older)



Risk Factors

- ▶ **Older age** (65 and older)
- ▶ **Family history** (especially a first degree relative such as a parent or sibling)
- ▶ **Genetics** (presence of APOE-e4, PSEN1, PSEN2, or APP genes)

The PSEN1, PSEN2, and APP genes are associated with autosomal dominant Alzheimer's disease (ADAD) — a rare type of Alzheimer's that typically develops before the age of 60 but accounts for less than 1% of all cases.

- ▶ **Cardiovascular disease** (high blood pressure, high cholesterol, diabetes)
- ▶ **Lifestyle factors** (e.g., lack of exercise, poor diet, chronic stress, smoking, excessive alcohol consumption)
- ▶ **Head injuries**

Impacts on Women

- ▶ African American and Hispanic women are up to 2x more at risk of developing Alzheimer's than other racial groups.

- ▶ Women tend to perform better than men in verbal memory tests, so they may still pass diagnostic tests despite having an underlying brain pathology for dementia.
- ▶ Women display faster cognitive decline and brain atrophy with mild cognitive impairment (MCI) diagnoses, and have a 30% increased mortality risk with Alzheimer's.
- ▶ 11 million women live with or care for someone with Alzheimer's.
- ▶ 60% of Alzheimer's and dementia caregivers are women, and 19% of the women caregivers quit work due to the burden of responsibilities.



Diagnosing Alzheimer's Disease

Early diagnosis is essential for slowing the progression of Alzheimer's disease, planning for long-term management and care, and maintaining quality of life for both patients and caregivers. Diagnosing Alzheimer's disease involves a thorough evaluation of a person's medical history and symptoms, as well as a combination of tests, that may include:

- ▶ **Neurological exams** to assess a person's brain and nervous system function
- ▶ **Cognitive tests** to evaluate a person's memory, thinking, attention, and problem-solving skills, among other daily behaviors and functions

Commonly used cognitive tests include the [Montreal Cognitive Assessment](#) for early detection of mild cognitive impairment, the [Mini-Mental State Exam](#) paper test for quantifying cognitive function and loss, and the [Mini-Cog](#) quick screening for easy dementia testing.

- ▶ **Genetic testing** to evaluate for certain genes associated with an increased risk of developing Alzheimer's disease, such as the APOE-E4 gene
- ▶ **Brain imaging** (e.g., MRI, CT, or amyloid PET scans) to rule out other conditions and to detect changes in the brain, such as amyloid plaques
- ▶ **Spinal tap (lumbar puncture)** to collect cerebrospinal fluid to test for biomarkers, such as the presence of amyloid or tau proteins

Emerging studies seek to develop blood tests that can provide an easily accessible and inexpensive diagnosis of Alzheimer's disease.

Policy Opportunities

Alzheimer's disease is a rapidly growing public health crisis. Federal policies could have significant bearing on improving Alzheimer's related dementias health outcomes.

▶ Legislative Opportunities

- [Concentrating on High-Value Alzheimer's Needs to Get to an End \(CHANGE\) Act](#) (S.1692/H.R.3354) would modify the requirements under Medicare for diagnosing and treating Alzheimer's disease.

- [Diversifying Investigations Via Equitable Research Studies for Everyone \(DIVERSE\) Trials Act](#) (S.2706/H.R.5030) would require activities to increase diversity in clinical trials.

▶ Regulatory Opportunities

- U.S. Centers for Medicare & Medicaid Services (CMS) provides each patient coverage for one beta-amyloid positron emission tomography (PET) scan per lifetime, but only accessible through clinical studies. Enhancing access to these scans could give providers greater understanding of a patient's diagnosis and treatment recommendations.
- CMS issued a 2022 national coverage decision limiting coverage of monoclonal antibody drugs that target amyloid plaques to patients in clinical trials and excluding drugs approved through accelerated approval, ultimately limiting the number of patients who can access these treatments.

- ▶ **Public Education and Awareness:** While there is currently no cure for Alzheimer's disease, research indicates there may be a window of time to prevent or delay irreversible dementia symptoms. Broad-scale awareness campaigns can bring needed attention to the signs and symptoms, disease misperceptions, and value of early detection and diagnosis.

References

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