

FDA's New Approval; Kisunla (Donanemab-Azbt): A Major Breakthrough in Alzheimer's Care

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Madam, Alzheimer's disease, the most pervasive form of dementia, is a neurodegenerative disorder that relentlessly erodes memory, reasoning and judgment. As it advances, it dismantles the cognitive abilities that define one's identity, causing significant disruptions to daily life.¹ Pakistan, the world's sixth most populous nation, has 150,000–200,000 people battling dementia. As life expectancy climbs, dementia rates among those over 65 have surged from 2% to 6%, highlighting a growing and urgent public health concern.²

On July 2, 2024, The U.S. Food and Drug Administration approved Kisunla (donanemab-azbt) injection for the treatment of Alzheimer's disease.³ Donanemab is a special type of antibody that targets the specific form of Amyloid-beta (N3pGlu A β), found in brain plaques associated with Alzheimer's disease. It works by sticking to these plaques and helping the brain's immune cells, called microglia, to recognize and remove them.⁴

Traditionally, managing Alzheimer's disease focussed on relieving symptoms without addressing the underlying causes. Four key drugs prescribed include—donepezil, memantine, galantamine, and rivastigmine. Donepezil, galantamine, and rivastigmine increase acetylcholine, a brain chemical that aids memory and communication between brain cells, while memantine regulates glutamate to protect neurons from damage. However, these medications offer temporary relief, and one of the main challenges is effectively delivering them to the brain.⁴

Recently, the treatment focus has shifted to targetting the Amyloid-beta (A β) protein, crucial in the disease's progression. In Alzheimer's disease (AD), the decline in cognitive abilities is closely linked to the buildup of two main harmful proteins in the brain: Amyloid-beta and Tau. Amyloid-beta forms clumps in the brain, which trigger changes in tau. These changes cause tau to form tangles, disrupting brain function and thus creating a harmful cycle that leads to neuroinflammation and neurodegeneration.

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Submission completed: 26-09-2024 **1st Revision received:** 28-01-2025

Acceptance: 15-02-2025

Last Revision received: 14-02-2025

The interaction between Amyloid-beta and tau is critical in understanding the disease, which is why developing effective treatments to target these proteins is so crucial for combating AD.⁵

Among newer treatments, Donanemab stands out for its precision and benefits. Unlike aducanumab, which has the highest risk of amyloid-related imaging abnormalities (ARIA), including ARIA-oedema and ARIA-haemorrhage, Donanemab shows a lower incidence of these issues. While Lecanemab also helps with plaque reduction and memory loss, it requires bi-weekly infusions, whereas Donanemab only requires monthly infusions. Overall, Donanemab's targeted action, safer profile, and less frequent dosing makes it a promising option for Alzheimer's disease.⁵

The FDA's approval of Kisunla (Donanemab-Azbt) represents a significant advancement in Alzheimer's treatment, offering improved efficacy and safety compared to existing options. Its targeted action and reduced side effects make it a promising addition to the treatment arsenal. For Pakistan, where dementia rates are rising and treatment options are limited, Kisunla could offer a much-needed improvement in patient care and quality of life.

Disclaimer: None.

Conflict of interest: None.

Funding disclosure: None.

DOI: <https://doi.org/10.47391/JPMA.21951>

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Author Contribution:

ZB: Title selection, writing, data collection, final approval and agreement to be accountable for all aspects of the work.

AB: Revision.