

SEX DIFFERENCES IN THE EFFECTS OF LECANEMAB IN EARLY ALZHEIMER'S DISEASE: A MULTICENTER REAL-WORLD STUDY IN NORTHWESTERN CHINA

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Background

- Lecanemab is the first FDA-approved drug for A β clearance in Alzheimer's disease treatment.
- Subgroup analysis of the Clarity AD trial suggested limited efficacy in female patients.
- Real-world data regarding sex-based differences in lecanemab response among Chinese populations remains unreported.

Methods

- **Study design:** Multicenter case registry study across 13 hospitals in Northwest China.
- **Participants:** A β -positive AD patients (confirmed by cerebrospinal fluid [CSF] or positron emission tomography [PET]) receiving lecanemab.
- **Clinical assessment:** Regular evaluation every 3 months via Clinical Dementia Rating-Sum of Boxes (CDR-SB), Alzheimer's Disease Assessment Scale (ADAS-cog), Alzheimer's Disease Cooperative Study-Activities of Daily Living Scale (ADCS-ADL), and Minimal-Mental State Examination (MMSE).

Results

- A total of 189 participants received lecanemab treatment by January 10, 2026, with females accounting for 65.1% (123/189). No significant between-sex differences were found in baseline clinical characteristics.
- At 12 months, the mean changes from baseline **in the female and male groups** were as follows: CDR-SB, 0.81 vs. 0.50 (difference, 0.31; P=0.715); MMSE, -0.56 vs. 0.50 (difference, -1.06; P=0.574); ADAS-cog, 0.11 vs. -1.50 (difference, 1.61; P=0.660); and ADCS-ADL, -6.29 vs. 1.33 (difference, -7.62; P=0.022). **Notably, only the ADCS-ADL score showed a statistically significant intergroup difference.**

Table 1. Changes in clinical scales at 12 months.

Clinical scales	Female	Male	Difference (95% CI)	P value
CDR-SB score	0.81	0.50	0.31 (-1.54 to 2.17)	0.715
MMSE score	-0.56	0.50	-1.06 (-5.48 to 3.37)	0.574
ADAS-cog score	0.11	-1.50	1.61 (-6.53 to 9.76)	0.660
ADCS-ADL score	-6.29	1.33	-7.62 (-13.52 to -1.72)	0.220

Conclusion

- No significant sex differences were observed in cognitive outcomes during 12-month lecanemab treatment.
- Female patients presented a more pronounced decline in functional ability.
- Further studies are required to validate sex-related disparities in lecanemab efficacy.