

Retrospective Observational Cohort Study Of Real-world Clinical And Patient-reported Outcomes With Lecanemab



Lee Watson¹, Ruhaan Shah¹, Omar Almashharawi¹, Kevin Aimua¹, Maya Ibrahim¹, Ira Katigbak², Eduardo Chacon², Monica Crane².
¹University of Tennessee Knoxville, Knoxville, TN, USA, ²Tennessee Memory Disorders Foundation, Knoxville, TN, USA

INTRODUCTION

- Lecanemab, a humanized IgG1 monoclonal antibody targeting amyloid-beta protofibrils, represents the **first disease-modifying therapy to receive full FDA approval for treating mild cognitive impairment (MCI) and mild dementia due to Alzheimer's Disease (AD)**.
- Real world clinical evidence is an area of ongoing evaluation especially with high heterogeneity within the patient population. This study investigates patient satisfaction in concert with clinical progression within a single U.S. clinical practice.

METHODS

- We conducted a retrospective observational cohort study of patients receiving lecanemab for ≥ 6 months, comparing biomarker confirmed MCI and mild AD, at a multidisciplinary memory disorders clinic.
- Data included chart abstractions and patient reported outcomes collected at least 6 months post treatment initiation via a 10-item survey using a 5-point Likert scale addressing symptomatic stability and functional performance in activities of daily living (ADLs).
- Descriptive statistics were used to analyze and compare cognitive progression and satisfaction outcomes.
- Cognitive decline was defined as a drop in cognitive testing equal to or greater than 3 points per year

5-Point Likert Scale

Patient-reported response options



Figure 1. Five point Likert scale used to categorize patient survey responses ranging from "Never" to "Very Frequently"

RESULTS

- Among surveyed patients (n=41), the mean age was 72.9, the majority were **MCI (70%)**, female (66%), and white non-hispanic (100%), with an **average treatment duration of 19 months**.
- A total of 28 patients (65%) were **APOE4 carriers (55% heterozygous and 10% homozygous)**.
- Two patients (4.9%) experienced ARIA; one asymptomatic ARIA-E and one asymptomatic ARIA-H
- Cognitive testing results from the **MCI cohort showed that 77.8% remained stable, 3.7% improved, and 18.5% declined, compared to 57.1%, 14.3%, and 28.6% respectively in the mild AD cohort.**
- Across functional items, **29.6-70.4% of MCI participants reported frequent success of cognitive tasks and 51.9-92.6% maintained high engagement in ADLs, compared to 14.3-71.4% and 64.3-100% in the mild AD cohort.**
- Qualitative feedback identified **perceived disease stability or attenuated progression as primary benefit (74.1% MCI and 71.4% mild AD), followed by emotional benefits or increased hope (14.8% MCI; 21.4% mild AD).**
- A subset (**25.9% MCI; 35.7% mild AD**) noted difficulty quantifying improvement without knowing how untreated progression would look.



Figure 2. Two of 41 patients (4.9%) experienced ARIA — one ARIA-E ($\epsilon 2/\epsilon 4$) and one ARIA-H ($\epsilon 3/\epsilon 4$), both heterozygous APOE4 carriers. Both resolved, at 58 and 43 days respectively.



Figure 3. Diverging Likert distribution of patient-reported cognitive and functional survey responses by cohort. Percentages indicate the proportion of respondents selecting each response category.

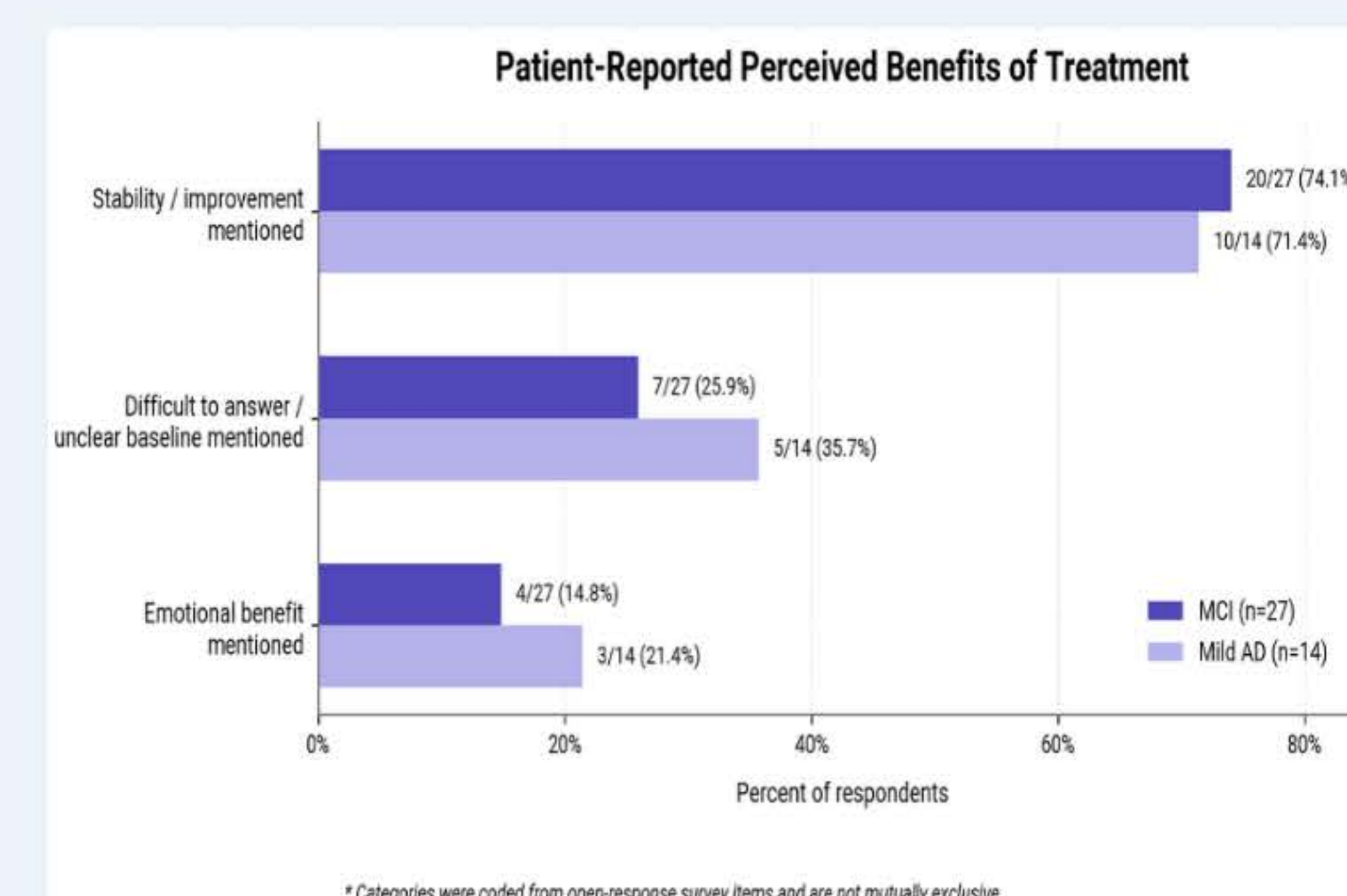


Figure 4. Families frequently cited perceived disease stability or attenuated progression as primary benefit (74.1% MCI and 71.4% mild AD), followed by emotional benefits or increased hope (14.8% MCI; 21.4% mild AD) as well as difficulty quantifying improvement due to absence of untreated comparison (25.9% MCI; 35.7% mild AD).

CONCLUSION

- In a real-world clinical setting, the mild AD cohort experienced greater clinical decline than the MCI counterpart; however, **both cohorts reported high satisfaction and perceived stability in ADLs with lecanemab treatment.**
- The mild AD cohort's greater decline is consistent with typical disease progression **reinforcing the importance of early intervention.**
- High satisfaction rates underscore the perceived value of disease-modifying interventions in early-stage AD.**

LIMITATIONS

- Limitations include **limited sample size, lack of and untreated control group, and an ethnically homogenous population.**

ACKNOWLEDGEMENTS

We thank the patients and their families for their participation. Funding for editorial support was provided by Eisai Inc. The study data, analysis, and conclusions are entirely of the authors.