

REAL-WORLD OUTCOMES WITH LECANEMAB TREATMENT IN A NEW ENGLAND ALZHEIMER’S DISEASE CENTER



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Introduction

- Development of Alzheimer’s disease (AD) involves pathologies, including those of amyloid beta (Aβ) peptide and tau processing, inflammation, oxidative stress, and vascular risk factors
- AD has a non-linear progression over time that begins slowly during the initial phase of disease and then rapidly increases as patients transition from mild cognitive impairment (MCI) to AD
- Lecanemab is an anti-amyloid monoclonal antibody that targets plaques and neurotoxic Aβ protofibrils, which are more toxic than monomers or insoluble fibrils/plaque¹⁻¹¹
- In clinical studies, lecanemab 10 mg/kg biweekly has been shown to slow decline on clinical endpoints of cognition and function as well as improve quality of life in patients with early symptomatic AD for up to 48 months to date²⁻⁴
- Lecanemab was well tolerated in clinical trials, with common adverse events including amyloid-related imaging abnormalities (ARIA) and infusion reactions^{2-3,12}
- The objective of this retrospective case series is to provide an update on our real-world experience with lecanemab treatment in patients with early AD

Methods

- This is a single-center, retrospective case series of patients with early AD who were treated with lecanemab at the Neurology and Infusion Centers of New England in Foxboro, Massachusetts
- Data collection included patient demographic characteristics, clinical history, lecanemab treatment exposure, and time from diagnosis to treatment. Assessments included Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA) Test for Dementia, and safety measures
- For efficacy, post-baseline MMSE and MoCA were classified as improved, stable (within 10% of baseline), or declined
- Clinician perspectives and feedback were gathered from real-world experience with lecanemab
- Data were summarized descriptively

Results

Patient Characteristics

- A total of 77 patients with early AD were included (41 and 35 patients with 6-month follow-up, 34 and 26 patients with 12-month follow-up, and 22 and 13 patients with 18-month follow-up for MMSE and MoCA results, respectively) (**Table 1**)
- Most of the patients were Caucasian (88%) and female (61%), with a mean age of 75 years (**Table 1**)
- The most common diagnosis was mild cognitive impairment (53%), and 66% of patients were APOE4 carriers (53% heterozygotes; 13% homozygotes; **Table 1**)
- Median time from diagnosis (i.e., confirmed amyloid positivity) to first lecanemab dose in newly treated patients was 124.5 days
- Average duration of therapy is 12.2 months

Table 1. Patient Characteristics

Characteristic	(N = 77)
Mean age (range), years	75 (55, 84)
Sex, n (%)	
Female	47 (61)
Male	30 (39)
Race, n (%)	
Caucasian	68 (88)
Not reported	9 (12)
Clinical subgroup, n (%)	
Mild cognitive impairment	41 (53)
Mild dementia due to Alzheimer’s disease	36 (47)
APOE ε4 status, n (%)	
Noncarrier	26 (34)
Carrier	51 (66)
Heterozygotes	41 (53)
Homozygotes	10 (13)

Effectiveness

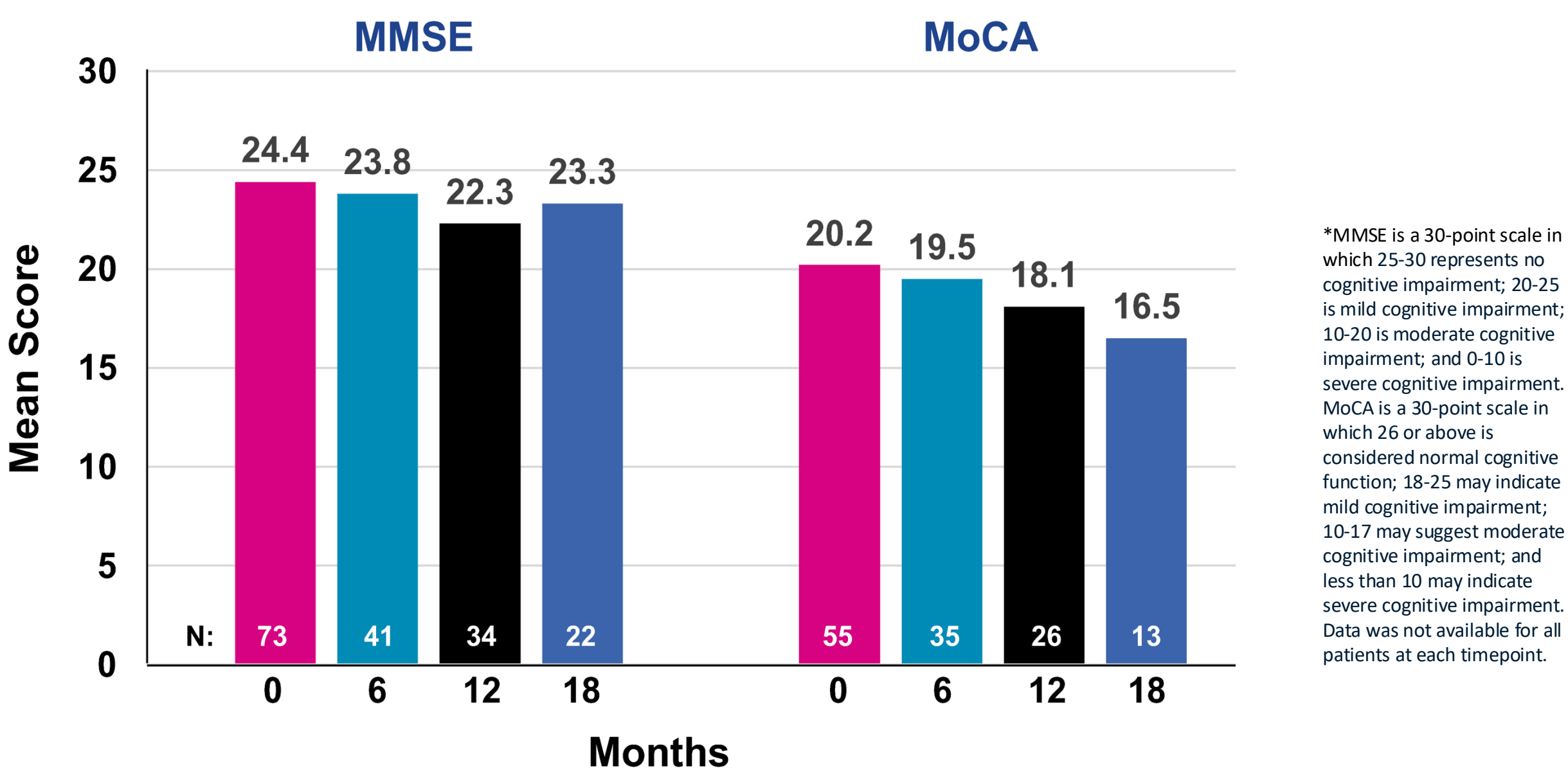
- At 6, 12 and 18 months, mean MMSE (baseline:24.4; 6-months:23.8; 12-months:22.3; 18-month:23.3) and mean MoCA scores (baseline:20.2; 6-months:19.5; 12-months:18.1; 18-month:16.5) were generally maintained or improved (**Figure 1**)
 - Results were the same for females and males
- At 6 months, 90% (37/41) of patients had stable (44%) or improved (46%) MMSE scores and 83% (19/23) of patients had stable (26%) or improved (57%) MoCA scores
 - At 18 months, 72% (13/18) of patients had stable (33%) or improved (39%) MMSE scores and 75% (6/8) of patients had stable (38%) or improved (38%) MoCA scores
- Eight patients who were initially receiving aducanumab were safely transitioned to lecanemab treatment upon market withdrawal. No ARIA was observed and effectiveness was stable or improved:
 - mean MMSE: lecanemab baseline:21.6; 6-months:22.1; 12-month:19.3
 - mean MoCA scores: lecanemab baseline:15.3; 6-months:17.8; 12-month:18.8

Safety

- Three ARIA-E (5%) cases (one symptomatic), 5 asymptomatic ARIA-H (8%) cases, and 18 infusion-site reactions (28%) were observed
- Thirteen patients discontinued lecanemab (patient choice: 3; switch medications: 3; deceased: 2; ARIA: 1; co-morbid conditions: 4)

Results

Figure 1. Effectiveness Assessments*



Survey

- 95% of survey responders reported feeling ‘very satisfied’ or ‘satisfied’ with lecanemab treatment (**Table 2**)
- For a full list of survey narratives, scan this QR code:

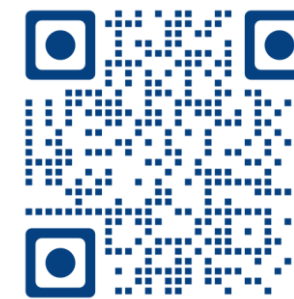


Table 2. Survey Results for Patients on Lecanemab Treatment

Experience During Lecanemab Treatment [Choices: Very frequently/Frequently/Occasionally/Rarely/Never]		Very Frequently or Frequently		
		Initial (N=40)	6-Month Follow-up* (N=26)	12-Month Follow-up* (N=10)
1	Remembers things on a list or a reminder	66%	69%	50%
2	Knows the date and time	46%	38%	40%
3	Manages money or pays bills correctly	49%	38%	40%
4	Follows instructions or steps to do something	73%	65%	40%
5	Socializes with family or friends	90%	88%	100%
6	Can complete basic household chores	83%	81%	80%
7	Keeps an interest in doing things they enjoy	89%	88%	80%
8	Washes, dresses, or grooms themselves	88%	88%	90%
9	Does not get lost in familiar places	90%	88%	90%
Patient Experience [Choices: Very satisfied/Satisfied/Neutral/Dissatisfied/Very Dissatisfied]		Very Satisfied (VS) or Satisfied (S)		
		Initial (N=40)	Follow-up* (N=26)	Follow-up* (N=26)
	Overall experience with treatment	95% (VS: 70% S: 25%)	100% (VS: 65% S: 35%)	100% (VS: 100%)
What was most important change patient saw with lecanemab treatment, if any?				
Maintaining /be stable/no decline		43%	32%	80%
Improved since initiating treatment		27%	6%	20%
Slowing the progression		13%	13%	-
Have increased hope, feel hopeful		7%	19%	-
Progressed		3%	13%	-
Others		7%	19%	-
Examples of Improved:				
Patient is not repeating self as much as before and has reduced "outbursts"				
Patient's attention and focus time frame has lengthened since before treatment when doing activities of interest such as jigsaw puzzles, art/painting, and crossword puzzles				
Don't feel I am as bad as I was before starting treatment				
Patient is not as frustrated as they used to be, and they are much more social				
They are doing better in the sense that they will go out and do yard work and be outside for hours				
I feel like I am able to remember more things (ie, conversations with people) and I am not searching for words as much as I used to				
I am more motivated to do things. I start activities earlier in the day than I used to				
The patient feels more focused with less confusion since starting the medication				
*Average time after baseline for first and second follow-up surveys were 184 (approximately 6.1 months) and 722 days (approximately 23.7 months), respectively.				

Conclusions

- Treatment with lecanemab in our infusion center experience were consistent with other real-world analyses and published clinical trials, which demonstrated that lecanemab slowed disease progression in early-stage AD
- Patients receiving lecanemab (mean of almost a year) reported consistently positive outcomes for AD symptoms and impact of treatment
- The observed safety of lecanemab was consistent with the known safety profile. No new safety signals were observed

Acknowledgments/Disclosures

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