



Brief Report

Real-world long-term continuation of lecanemab therapy and the clinical utility of phosphorylated tau 181

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ABSTRACT

This real-world study evaluated the long-term feasibility of lecanemab treatment in 117 patients with early Alzheimer's disease at Kanazawa University Hospital. To assess treatment persistence over a full 18-month course, we focused on the 64 patients who initiated treatment between January and December 2024. Of these 64 patients, 78.1% completed the full 18-month course, and all 48 eligible patients elected to continue beyond 18 months. The overall discontinuation rate was 21.9%, with amyloid-related imaging abnormalities (ARIA) (27.7%), decreased motivation (22.2%), and cognitive decline (11.1%) as the primary reasons. Among all 117 patients, ARIA occurred in 12.9% and was significantly associated with apolipoprotein Eε4 carrier status, elevated baseline cerebrospinal fluid (CSF)-phosphorylated tau (ptau) 181 (ptau181; ≥ 78.6 pg/ml), ≥ 2 microbleeds, and Fazekas score ≥ 2 deep white matter hyperintensity. Elevated CSF-ptau181 also independently predicted cognitive decline during treatment and ARIA-related discontinuation. These findings suggest that integrating CSF-ptau181 measurement and baseline MRI into clinical decision-making may support individualized risk stratification and the safe, sustained use of lecanemab in real-world practice.

1. Introduction

Lecanemab is an anti-amyloid monoclonal antibody with high selectivity for amyloid- β (A β) protofibrils, and its binding to A β protofibrils has been visualized via high-speed atomic force microscopy [1]. Cerebrospinal fluid (CSF) levels of A β protofibrils bound by lecanemab were quantified and found to be elevated across all stages of the Alzheimer's disease (AD) continuum [2]. The Clarity AD trial, an 18-month randomized controlled study, demonstrated that lecanemab treatment resulted in significantly less cognitive decline compared with placebo [3]. In Japan, lecanemab was approved for patients with early AD at the end of 2023 [4,5].

While the Clarity AD trial established the efficacy and safety of lecanemab under controlled conditions [3], its translation into real-world clinical practice presents distinct challenges. Real-world patients often present with greater comorbidities and concomitant medications, moreover, biweekly intravenous infusions impose a substantial burden on patients and families in terms of time and travel, all of which may affect treatment tolerability and persistence. Amyloid-related imaging abnormalities (ARIA) can necessitate treatment interruption or

permanent discontinuation; indeed, real-world studies have identified ARIA and cognitive decline as the primary reasons for lecanemab discontinuation [6–10]. However, most available reports have been restricted to short-term observations, with little data extending beyond 12 months [7,8,10].

Beyond clinical factors, patient and family perspectives play a critical role in treatment decision-making. Under the Japanese guidelines for proper lecanemab use [11], treatment beyond 18 months requires for confirmation that patients have not progressed to moderate or severe dementia and that they intend to continue therapy. Despite this, data on patient and family attitudes toward lecanemab beyond 18 months remain scarce, with most existing studies [7,8,10] focusing on clinical outcomes and little attention given to the factors shaping continuation intentions. Elucidating these factors would provide valuable insights to support informed regarding long-term lecanemab therapy.

We previously reported that higher CSF-phosphorylated tau (ptau) 181 levels (≥ 78.6 pg/ml) predict cognitive decline and ARIA during lecanemab treatment, and that the presence of ≥ 2 microbleeds at baseline is associated with an increased risk of ARIA-H, whereas apolipoprotein E $\epsilon 4$ (APOE4) carrier status confers an increased risk of ARIA-

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E [6]. Despite the potential utility of these factors, their role in predicting treatment persistence beyond 12 months in real-world populations remains insufficiently characterized. Establishing the predictive value of CSF-ptau181, baseline microbleed burden, and *APOE4* status for treatment tolerability and long-term continuation would enable clinicians to identify patients at risk of discontinuation and to tailor treatment strategies accordingly.

In this study, we expanded upon our previous lecanemab cohort and reported clinical outcomes over an 18-month follow-up period. This study aimed to evaluate the long-term feasibility and sustainability of lecanemab treatment in a real-world clinical setting. Specifically, the objectives were to: (1) characterize treatment persistence and the factors associated with discontinuation over an 18-month course; (2) examine patient and family perceptions of lecanemab treatment and their intentions to continue treatment beyond 18 months; (3) assess the adverse effects, including ARIA, that influence continued treatment; and (4) identify baseline clinical, biomarker, and genetic factors, including CSF-ptau181 levels, microbleed burden, and *APOE4* status, that predict treatment tolerability and long-term persistence.

2. Methods

2.1. Study population

This retrospective review targeted patients treated with lecanemab at the anti-amyloid treatment clinic of Kanazawa University Hospital (Kanazawa, Japan). Eligible patients were diagnosed with early AD with confirmed amyloid pathology, as described previously [6]. Patients with a Mini-Mental State Examination (MMSE) score of < 22 or a clinical dementia rating (CDR)—a global score of ≥ 2 , or normal cognitive function were excluded. Instrumental activities of daily living (IADL) were measured using the IADL subscale of Tokyo Metropolitan Institute of Gerontology Index of Competence [12], which consists of 5 items: using bus or train, shopping, meal preparation, paying bill, and banking. For patients who initiated lecanemab therapy, cognition was evaluated using the MMSE at baseline and at 6-, 12-, 18- and 24-month follow-up assessments. At each 6-month visit, the treating physician asked both the patient and their family members about their motivation to continue lecanemab treatment using a standardized question. Although the format of documentation varied among physicians, all responses were recorded as either a desire to continue or to discontinue treatment. Ethical approval for this study was obtained from the Medical Ethics Review Board of Kanazawa University (approval number: 114,625) and all procedures were performed in accordance with the principles of the Declaration of Helsinki. Written informed consent was obtained from patients who visited the hospital after the study protocol was approved by the Medical Ethics Review Board of Kanazawa University. For patients who had visited prior to approval, consent was obtained through an opt-out process announced on the website.

2.2. Head MRI and amyloid PET

All patients underwent head MRI and amyloid PET imaging prior to initiating lecanemab therapy, as previously described [6]. Structural MRI was performed using 1.5- or 3-T scanners (Singa Artist, 1.5T, GE Healthcare, Chicago, IL, USA; Signa Premier, 3.0T, GE Healthcare; Ingenia 1.5T CX, Philips, Amsterdam, Netherlands; Ingenia 3.0T, Philips) and the sequences included diffusion-weighted, fluid-attenuated inversion recovery (FLAIR), T2*-weighted, and 3D T1-weighted sequences. The severity of leukoaraiosis, such as periventricular hyperintensity (PVH) and deep white matter hyperintensity (DWMH) was assessed using the Fazekas visual rating scale [13] on FLAIR imaging. MRI for ARIA monitoring was performed before infusions 5, 7, and 14 and every 6 months thereafter. ARIA severity was graded as mild, moderate, or severe based on imaging criteria according to the Japanese guideline for proper lecanemab use [11], which was developed based on

the article by Cummings et al. [14]. Amyloid PET was performed using a Vizamy PET tracer, and results were visually rated as positive or negative. Centiloid values were calculated using the VIZCalc method [15]. Patients with >4 microhemorrhages, a macrohemorrhage, superficial siderosis, vasogenic edema, multiple lacunar infarcts on MRI, or amyloid-negative PET findings were excluded.

2.3. CSF collection and assays

All patients underwent lumbar puncture before the first lecanemab infusion. CSF samples were collected, centrifuged, and stored at -80°C . CSF-ptau181 levels were measured using LUMIPULSE G assays (phosphor-tau [181p]; SRL, Tokyo, Japan), as previously described [6]. Based on our prior ROC analysis [6], a cutoff of 78.6 pg/ml was used to predict ARIA; therefore, patients with CSF-ptau181 concentrations ≥ 78.6 pg/ml comprised the high ptau group, and those with lower concentrations comprised the low ptau group.

2.4. Treatment regimen

Lecanemab was administered intravenously every 2 weeks as described in the prescribing information. Premedication, which consisted of acetaminophen, chlorpheniramine, famotidine, and dexamethasone was given for the first three infusions, as previously described [6].

2.5. Statistical analysis

Clinical characteristics were compared using a *t*-test for continuous variables and the chi-squared test for categorical variables. Treatment continuation and ARIA incidence were estimated using the Kaplan-Meier method, and the log-rank test was applied to compare these outcomes across groups stratified by age, sex, *APOE4* carrier status, CSF-ptau181 levels, number of microbleeds at baseline (0–1 vs ≥ 2), and Fazekas grades of PVH and DWMH. Generalized linear mixed-effects models, adjusted for age and sex, were used to evaluate the effects of age, sex, *APOE4* carrier status, and CSF-ptau181 levels on longitudinal changes in MMSE scores from baseline to the 6-, 12-, and 18-month follow-ups. A *p* value <0.05 was considered statistically significant. All statistical analyses were performed using Statistical Package for the Social Sciences software (version 31; IBM, Armonk, NY, USA).

3. Results

Between January 2024 and May 2026, 332 patients screened for anti-amyloid antibody therapy, 215 (64.7%) met eligibility criteria. Of these, 117 initiated lecanemab, 78 chose donanemab, and 20 declined treatment (Supplementary Fig 1). Compared with lecanemab-treated group, the eligible untreated group was significantly older, included a greater proportion of *APOE4* homozygous carriers, and had a higher proportion of patients receiving anticoagulation therapy (Supplementary Table 1). Of the 117 patients who received at least one lecanemab infusion, 64 initiated treatment between January and December 2024 and were eligible for the full 18-month follow-up analysis (Supplementary Fig 2). The remaining 53 patients initiated treatment between January 2025 and May 2026 and had not yet completed 18 months of treatment at the time of data cutoff (May 2026); these patients were included in analyses of overall discontinuation and ARIA incidence but were excluded from the 18-month trajectory analysis.

In the overall cohort of 117 patients, the average treatment duration was 14.4 months. In total, 18 patients (15.3%) discontinued treatment (Supplementary Fig 2). Of those, 16 patients discontinued treatment before completing 18 months of treatment, and the other two discontinued at 18 months. Five (27.7%) discontinued because of ARIA: three developed asymptomatic moderate solitary ARIA with edema (ARIA-E), and two developed six or more microhemorrhages. Of these

five patients, two were *APOE4* homozygous, two were heterozygotes, and one was a noncarrier. Four (22.2%) patients discontinued due to reduced motivation: two patients cited the burden of frequent clinic visits, one caregiver cited the burden of accompanying the patient to frequent clinic visits, and one patient and the caregiver cited a perceived lack of treatment efficacy. Other reasons for treatment discontinuation were cognitive decline and/or agitation related to disease progression ($n = 2$, 11.1%), infusion-related reactions ($n = 2$, 11.1%), anxiety about the risk of ARIA ($n = 1$), brain hemorrhage ($n = 1$), death in a traffic accident 12 months after starting lecanemab ($n = 1$), hospitalization for depression ($n = 1$), and asymptomatic subdural hematoma ($n = 1$) (Supplementary Fig 2).

Of the 64 patients who initiated lecanemab treatment between January and December 2024, 14 patients (21.9%), including two who progressed to moderate dementia, discontinued treatment before completing 18 months of treatment (Fig. 1 and Supplementary Fig. 2). Ultimately, 50 patients (78.1%) completed the 18-month treatment period through May 2026 (Supplementary Fig. 2). Of these patients, 38 (76.0%) had an MMSE score of ≥ 22 at the 18-month assessment, including nine patients with scores exceeding 28 points. Conversely, 12 patients (24.0%) exhibited cognitive decline, as indicated by an MMSE score of < 22 (range: 17–21) (Fig. 1). Among the 50 patients who completed 18 months of treatment, two were considered unsuitable for continued lecanemab treatment at the 18-month evaluation. One patient developed a brain hemorrhage, and the other exhibited a subdural hematoma. Ultimately, 48 patients (75.0%) were deemed eligible to continue treatment beyond 18 months (treatment-persistent group), all of whom elected to continue treatment. All 48 patients received infusions every 2 weeks (Supplementary Fig. 2). It should be noted that this every 2-week maintenance infusion schedule reflects the approved protocol in Japan and differs from the maintenance approach typically adopted in the United States and other countries. A majority of patients and their families believed that lecanemab therapy attenuated cognitive decline and expressed a desire to continue treatment.

Comparison of baseline demographics between the treatment-persistent and discontinued groups revealed that participants with ≥ 2 microbleeds were significantly more likely to discontinue for all reasons than those with 0–1 microbleeds ($p = 0.030$, Supplementary Table 2). Additionally, the proportion of participants with IADL impairment at baseline tended to be higher in the discontinued group than in the persistent group, although this difference did not reach statistical significance ($p = 0.067$). Moreover, individuals in the high ptau group and those with ≥ 2 microbleeds were significantly more likely to experience ARIA-related discontinuation than those in the low ptau group and those

with 0–1 microbleeds ($p = 0.019$ and $p < 0.001$, respectively, Fig. 2A, 2B, Supplementary Table 3). Although the differences did not reach statistical significance, women had a more than 2-fold higher discontinuation rate than men and non-carriers, respectively (Supplementary Table 3). Of the 108 patients who underwent surveillance head MRI at least once following lecanemab infusion, 14 (12.9%) developed ARIA. Solitary ARIA with hemorrhage (ARIA-H) was observed in 11 patients (10.1%), and ARIA-E was detected in four patients (3.7%). Concurrent ARIA-E with ARIA-H was not observed in any patient; however, one patient developed ARIA-E and ARIA-H at different time points (Supplementary Tables 4 and 5). All patients with ARIA-H had mild microbleeds, with the timing of detection ranging widely from 2 to 18 months after treatment initiation. No patients developed superficial siderosis. Among the four patients with ARIA-E, two had mild and two had moderate severity. The timing of moderate ARIA-E detection was 2 months after treatment initiation in both patients, whereas mild ARIA-E was detected at 3 and 12 months after treatment initiation (Supplementary Tables 4 and 5). Of the two patients with moderate ARIA-E, one reported mild dizziness and other experienced a new inability to copy interlocking pentagons on the MMSE, a task she had previously completed successfully [6,16]. According to the Japanese guideline [11], lecanemab treatment should be suspended in patients with moderate ARIA-E until complete resolution of imaging findings; therefore, treatment was temporarily suspended in both patients. Both received intravenous methylprednisolone pulse therapy, and follow-up MRI one month later demonstrated improvement in both patients [16]. However, neither patient wished to resume lecanemab treatment, and therapy was permanently discontinued. The remaining patients underwent MRI monitoring, and ARIA findings stabilized in all cases by 2 or 3 months. Two patients with ARIA-H discontinued lecanemab because of the total number of microbleeds reached six or more, as they had 3 or 4 microbleeds at baseline. All other patients continued lecanemab treatment. When comparing the demographics of patients with and without ARIA, *APOE4* carriers (17.6%) showed significantly higher ARIA incidence than noncarriers (2.9%) ($p = 0.039$, Fig. 2C). A higher frequency of ARIA was observed among $\epsilon 4$ homozygotes (27.8%) than among $\epsilon 4$ heterozygotes (14.3%) (Supplementary Fig. 3). The high ptau group was significantly associated with ARIA compared to the low ptau group ($p = 0.009$, Fig. 2D). Regarding the baseline MRI findings, patients with ≥ 2 microbleeds and those with Fazekas score ≥ 2 DWMH were more likely to have ARIA ($p = 0.002$ and $p = 0.009$, respectively, Fig. 2E, F, Supplementary Table 6).

In total, 91, 77, and 50 patients completed cognitive assessments at 6, 12, and 18 months, respectively. To examine factors associated with

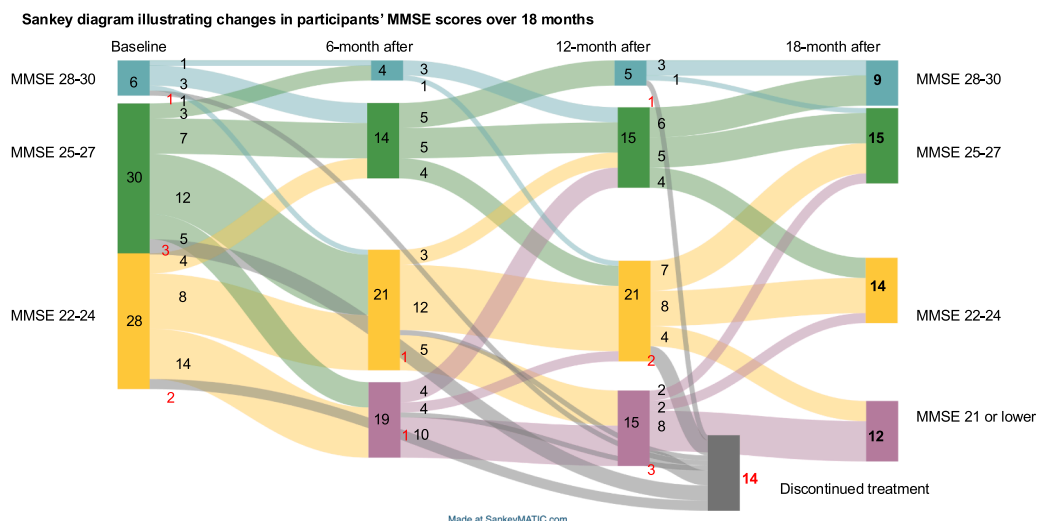


Fig. 1. Sankey diagram illustrating changes in MMSE scores over 18 months among 64 participants who initiated treatments before Dec 2024.

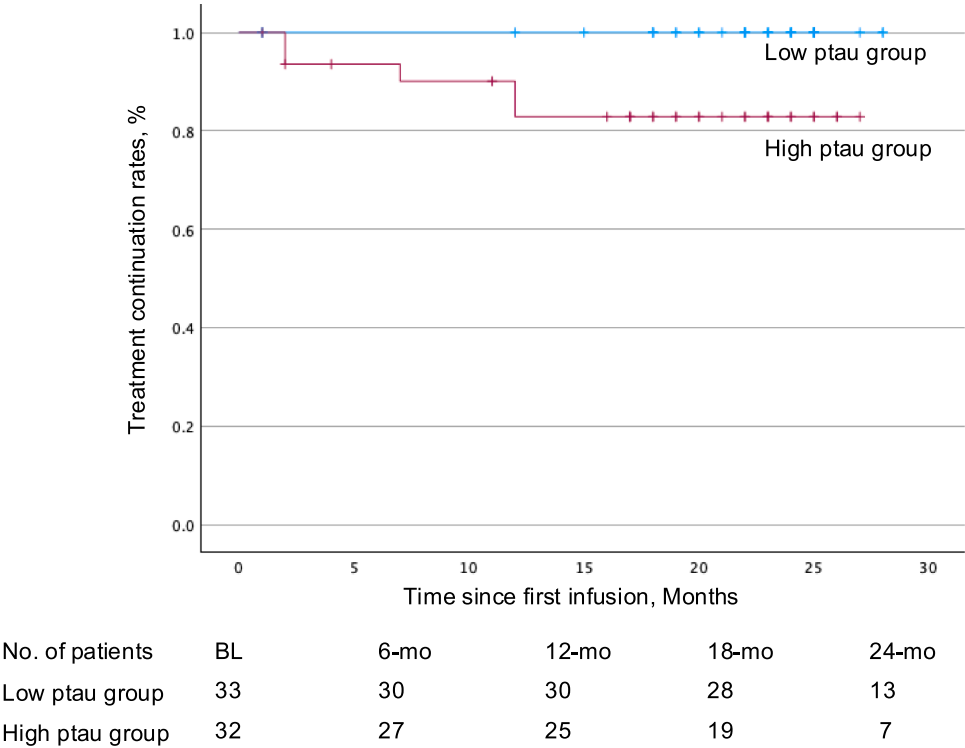


Fig. 2A. Treatment continuation rates without ARIA-related discontinuation stratified by CSF-ptau181 levels

The analyses include 65 individuals who continued treatment beyond 18 months and who discontinued treatment before completing 18 months. Cerebrospinal fluid (CSF) could not be obtained from one patient, therefore the number of patients in the low/high phosphorylated tau (ptau) groups is one less than the total. Patients in the high ptau group (CSF-ptau181 ≥ 78.6 pg/ml) were significantly more likely to discontinue lecanemab due to amyloid related imaging abnormalities compared to patients in the low ptau group (CSF-ptau181 < 78.6 pg/ml). Abbreviations: ARIA, amyloid related imaging abnormalities; CSF, cerebrospinal fluid; ptau, phosphorylated tau.

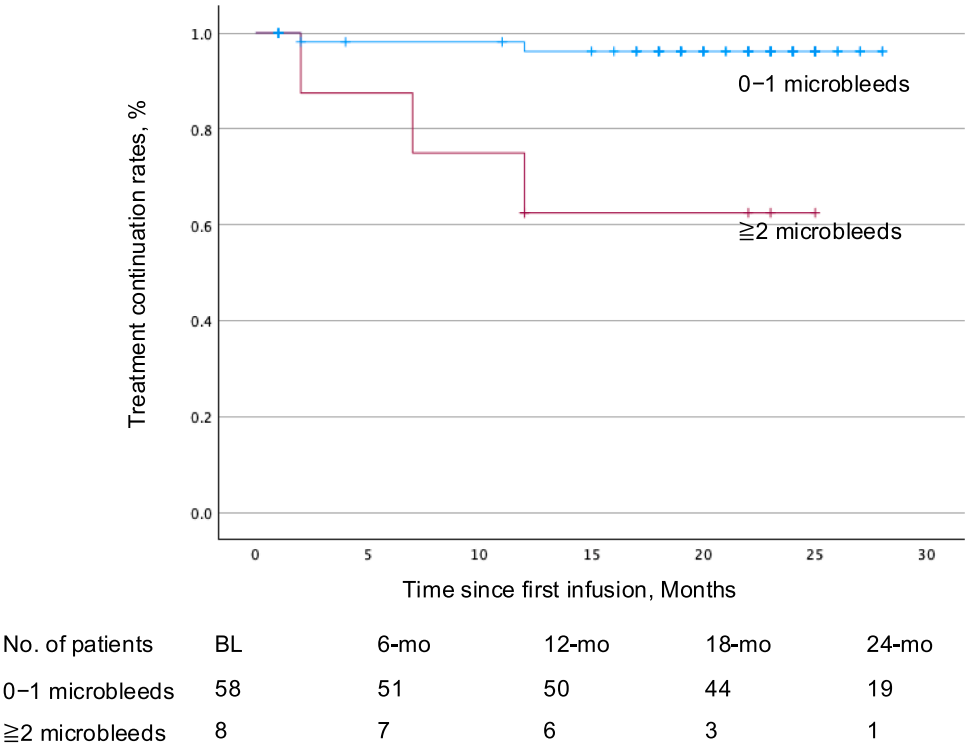


Fig. 2B. Treatment continuation rates without ARIA-related discontinuation stratified by baseline number of microbleeds (≥ 2 vs. 0-1).

The analyses include 66 individuals who continued treatment beyond 18 months and who discontinued treatment before completing 18 months. ARIAs occurred significantly more frequently in patients with ≥ 2 microbleeds at baseline MRI than those with 0-1 microbleeds. Abbreviations: ARIA, amyloid related imaging abnormalities.

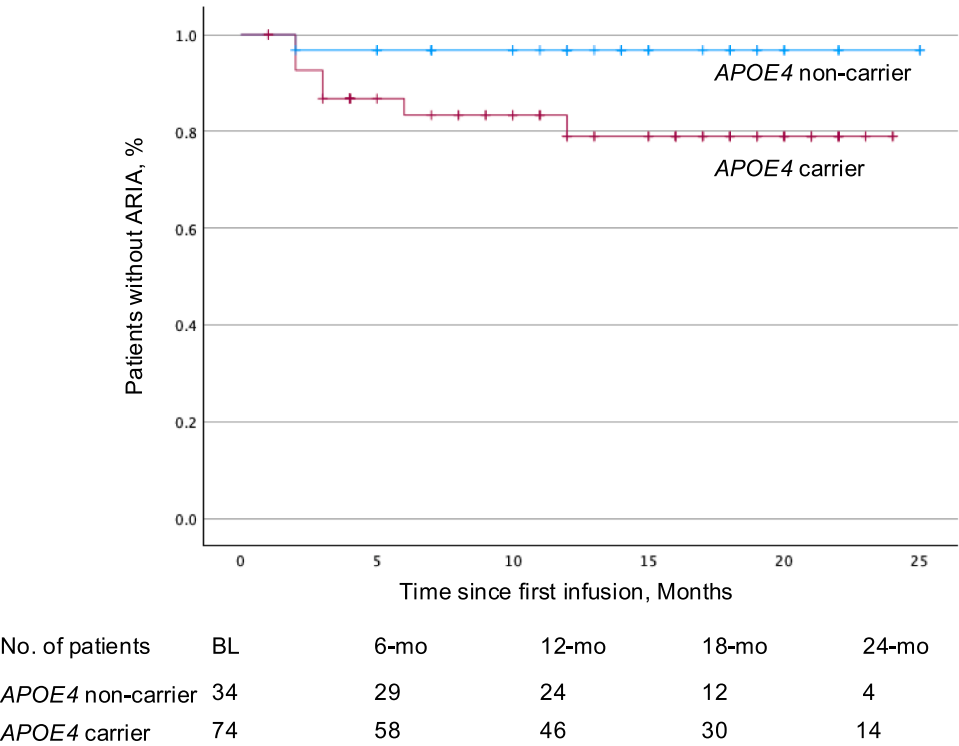


Fig. 2C. Rates of patients without ARIA stratified by *APOE4* carrier status. The analyses include 108 individuals at risk for amyloid related imaging abnormalities (ARIA) who received at least 4 infusions of lecanemab and underwent at least 1 monitoring MRI. ARIAs occurred significantly more frequently in apolipoprotein Eε4 carriers than in non-carriers. Abbreviations: *APOE4*, apolipoprotein Eε4; ARIA, amyloid related imaging abnormalities.

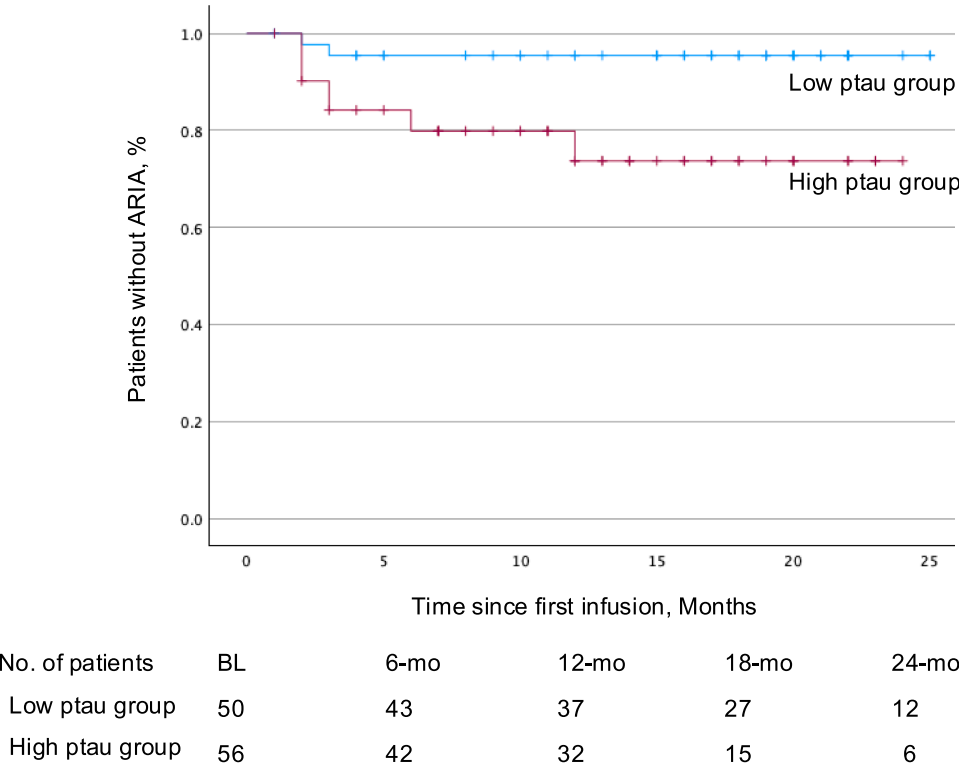


Fig. 2D. Rates of patients without ARIA stratified by CSF-ptau181 levels. The analyses include 106 individuals at risk for amyloid related imaging abnormalities (ARIA) who received at least 4 infusions of lecanemab and underwent at least 1 monitoring MRI. Cerebrospinal fluid (CSF) could not be obtained from two patients, therefore the number of patients in the low/high phosphorylated tau (ptau) groups is two less than the total. ARIAs occurred significantly more frequently in patients with the high ptau group (CSF-ptau181 ≥ 78.6 pg/ml) than in the low ptau group (CSF-ptau181 < 78.6 pg/ml). Abbreviations: ARIA, amyloid related imaging abnormalities; CSF, cerebrospinal fluid; ptau, phosphorylated tau.

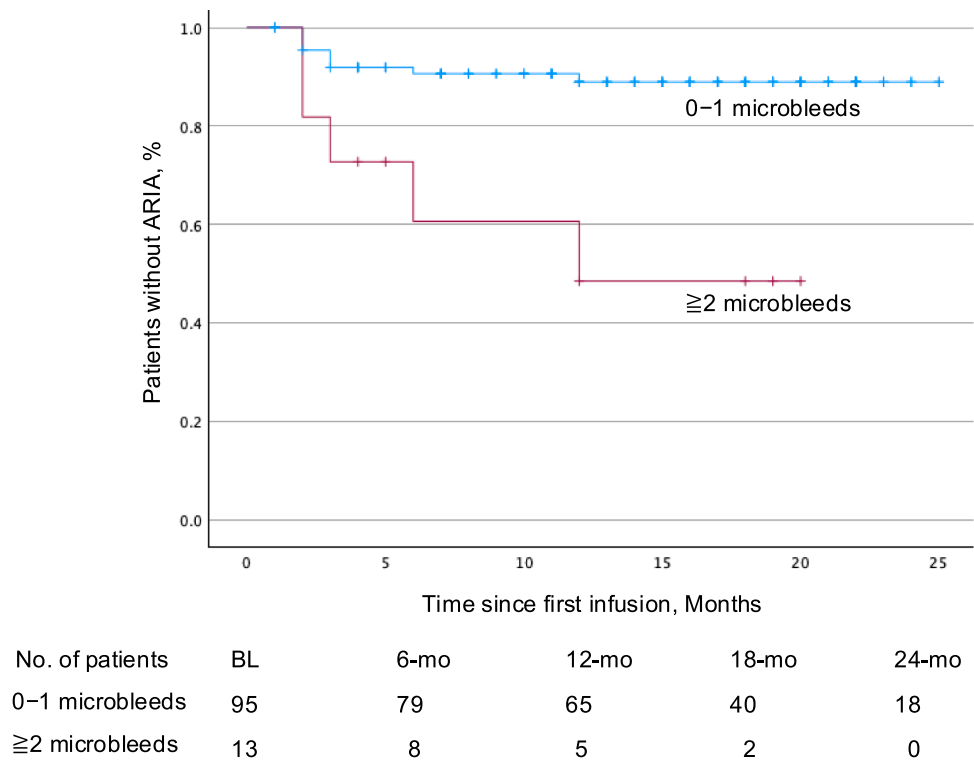


Fig. 2E. Rates of patients without ARIA stratified by baseline number of microbleeds (≥ 2 vs. 0-1) The analyses include 108 individuals at risk for amyloid related imaging abnormalities (ARIA) who received at least 4 infusions of lecanemab and underwent at least 1 monitoring MRI. ARIAs occurred significantly more frequently in patients with ≥ 2 microbleeds at baseline MRI than those with 0-1 microbleeds. Abbreviations: ARIA, amyloid related imaging abnormalities.

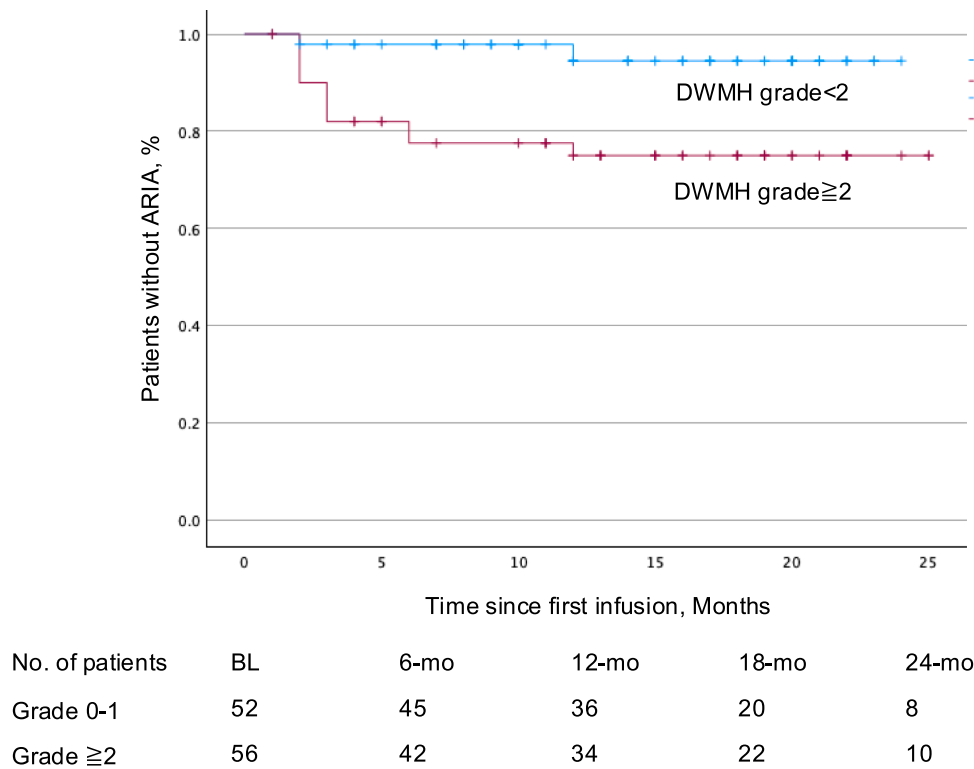


Fig. 2F. Rates of patients without ARIA stratified by baseline Fazekas score of DWMH (≥ 2 vs. 0-1) The analyses include 108 individuals at risk for amyloid related imaging abnormalities (ARIA) who received at least 4 infusions of lecanemab and underwent at least 1 monitoring MRI. ARIAs occurred significantly more frequently in patients with grade ≥ 2 deep white matter hyperintensity (DWMH) at baseline MRI than those with Fazekas score 0-1 DWMH. Abbreviations: ARIA, amyloid related imaging abnormalities; DWMH, deep white matter hyperintensity.

longitudinal cognitive trajectories, participants were stratified according to baseline age, sex, *APOE4* carrier status, and CSF-ptau181 levels. Linear mixed-effects models demonstrated that higher CSF-ptau 181 levels were significantly associated with cognitive decline during lecanemab treatment after adjustment for age, sex, and *APOE4* carrier status ($p = 0.008$, Supplementary Fig. 4A). Additionally, *APOE4* carriers tended to have a higher risk of cognitive decline ($p = 0.078$, Supplementary Fig. 4B). However, age and sex exhibited no significant associations with cognitive decline during lecanemab therapy.

4. Discussion

In this real-world cohort of 117 patients, the 18-month treatment completion rate was 78.1%, demonstrating that sustained treatment is achievable. The discontinuation rate of 21.9% in our cohort (mean treatment duration, 18.5 months) was comparable to, or lower than, rates reported in previous studies with considerably shorter follow-up periods: 9.8% over 6.5 months [7], 17.1% over approximately 12 months [8], and 19.1% of over approximately 6 months [10]. Given the substantially longer mean treatment duration in our cohort, this rate should be interpreted as relatively modest, suggesting favorable long-term tolerability in a real-world setting. The primary drivers of discontinuation in our cohort—ARIA (27.7%), decreased motivation to continue therapy (22.2%) and cognitive decline (11.1%)—were consistent with those reported in previous real-world studies, in which discontinuation attributable to ARIA, decreased motivation, and cognitive decline occurred in 8–43%, approximately 13%, and 31–54% of patients, respectively [7,8,10], reinforcing that these factors represent common challenges across healthcare settings.

The overall ARIA incidence of 12.9% in this cohort was lower than that reported in the overall Clarity AD trial [3], but comparable to that observed in the Asian subgroup analysis of the same trial [17]. Consistent with previous reports [3,6–8], *APOE4* carrier status was significantly associated with ARIA incidence; notable, *APOE4* homozygotes exhibited the highest ARIA frequency (27.8%), underscoring the additive effect of allele dosage. Higher CSF-ptau 181 levels, ≥ 2 microbleeds and Fazekas score ≥ 2 DWMH at baseline were also independently associated with ARIA, suggesting that combination of genetic, biomarker, and imaging features may identify patients at heightened risk prior to treatment initiation. Among patients who completed 18 months of therapy, most maintained an MMSE score of ≥ 22 , with 9 achieving scores above 28 points—suggesting that meaningful cognitive preservation is attainable in a substantial proportion of real-world patients. Generalized linear mixed effects analyses identified elevated baseline CSF-ptau181 as a significant independent predictor of cognitive decline during lecanemab treatment, even after adjustment for age, sex and *APOE4* status. A central finding of this study is that elevated baseline CSF-ptau181 emerged as a consistent predictor across multiple treatment-related outcomes: ARIA occurrence, cognitive decline during treatment, and ARIA-related discontinuation. These findings extend our previously reported ROC analysis and suggest that CSF-ptau181 may serve as a practical biomarker for stratifying patients before treatment initiation. High CSF-ptau181 levels are believed to reflect the progression of tau pathology [18] as well as glial hyperactivity and neuroinflammation [19,20], as discussed in our earlier study [6]. These processes can contribute to the development of ARIA. Data from the Clarity AD open-label extension study suggest that lecanemab is more effective in individuals with milder tau pathology [21]. Accordingly, patients in the low ptau group, who exhibited milder tau pathology, might have a lower risk of ARIA and a reduced likelihood of treatment discontinuation because of progression to moderate dementia.

Notable, all 48 patients deemed eligible to continue lecanemab at the 18-month evaluation elected to do so. This uniform intent to continue, despite the practical burdens of biweekly intravenous infusions, suggests that a substantial proportion of patients and their families perceive meaningful clinical benefit from treatment. Under the Japanese

guidelines for proper lecanemab use [11], continuation beyond 18 months requires confirmation that patients have not progressed to moderate or severe dementia and that they wish to continue therapy; the high rate of continuation intent observed here indicates that these criteria can be met in a meaningful proportion of real-world patients when appropriate monitoring is in place.

The major limitations of this study include its relatively small sample size and lack of a control group, which may limit the robustness of our conclusions. Furthermore, selection bias at enrollment must be acknowledged. Patients who chose to undergo intensive biweekly infusions may differ from those who declined treatment in terms of health literacy, caregiver support, socioeconomic status, and disease awareness. Therefore, causal inference regarding cognitive outcomes should be interpreted with caution, and our findings should be considered exploratory. Although we compared baseline characteristics between the lecanemab-treated group and the eligible untreated group, the latter was significantly older, and included more *APOE4* homozygous carriers, both of which are associated with more rapid cognitive decline. These differences suggest that unmeasured and measure confounding factors may have contributed to an overestimation of the treatment benefit of lecanemab, and the observed cognitive outcomes in the treated group cannot be attributed to lecanemab alone. Additionally, our cohort consisted exclusively of Japanese patients, who may have lower ARIA rates compared to non-Asian populations [17]; therefore, the relationship between CSF-ptau181 levels and ARIA risk demonstrated in this study needs to be validated in non-Asian populations. Furthermore, whether this association extends to other anti-amyloid therapies, such as donanemab, remains to be determined. Despite this limitation, a major strength of this study was its real-world clinical data, which provided valuable insights into the safety and feasibility of lecanemab use in patients with early AD in a routine hospital setting.

In conclusion, this real-world study demonstrates that long-term lecanemab treatment is feasible and well-tolerated, with 78.1% of patients completing the full 18-month course and all eligible patients electing to continue beyond this timeframe. Elevated baseline CSF-ptau181 and ≥ 2 microbleeds emerged as consistent predictors of ARIA and treatment discontinuation, highlighting their potential utility as pretreatment biomarkers for individualized risk stratification. These findings suggest that integrating CSF-ptau181 measurement and MRI into clinical decision-making may enable clinicians to identify patients at elevated risk of adverse outcomes and to tailor monitoring strategies accordingly, thereby supporting the safe and sustained use of lecanemab in real-world practice.

Data sharing

Data is available from the corresponding author upon reasonable request.

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Financial disclosures of all authors

DM, AS, YS, YT, HY, JK, and TI have nothing to report. M N-S and KO report receiving honoraria from Eisai.

Ethics approval and consent to participate

This study was approved by the Medical Ethics Review Board of Kanazawa University (approval number 114625). Written informed consent was obtained from all patients who visited after the study protocol was approved by the Medical Ethics Review Board of Kanazawa University. For patients who visited before that, consent was obtained

by opt-out on the website.

Consent for publication

Not applicable. This manuscript does not contain any individual person's data in any form.

Declaration of the use of generative AI and AI-assisted technologies

We have nothing to disclose.

CRediT authorship contribution statement

Moeko Noguchi-Shinohara: Writing – original draft, Investigation, Formal analysis, Conceptualization. **Daiki Muramatsu:** Investigation. **Ayano Shima:** Investigation. **Yasuhiro Sakashita:** Investigation. **Yasutake Tada:** Investigation. **Hiroki Yamaguchi:** Investigation. **Junji Komatsu:** Investigation. **Tokuhei Ikeda:** Investigation. **Kenjiro Ono:** Writing – review & editing, Supervision, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Kenjiro Ono and Moeko Noguchi-Shinohara report financial support was provided by Eisai Co Ltd. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.tjpad.2026.100664](https://doi.org/10.1016/j.tjpad.2026.100664).

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