

Association of Amyloid Related Imaging Abnormalities with Blood Pressure and Anti-Hypertensive Use in a Memory Clinic

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- Rates of ARIA, ARIA-H, & ARIA-E were not associated with blood pressure or anti-hypertensive use
- ARIA-H was more common in lecanemab recipients compared to donanemab recipients (45% vs 15%)
- The small sample size of this study limits its interpretation and deserves further investigation in a larger clinic population

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS
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Amyloid Related Imaging Abnormalities (ARIA) are an adverse event that is sometimes observed in anti-amyloid monoclonal antibody treatments for Alzheimer’s disease. Although most cases are asymptomatic and captured by surveillance magnetic resonance imaging, identifying risk factors could be useful in counseling patients regarding this treatment. Clinical trial data suggests that elevated blood pressure may increase and anti-hypertensive use may decrease overall ARIA risk (1,2,3). We examined these variables in a real-world clinic population of early-stage Alzheimer’s disease patients who received amyloid targeting therapy (ATT) with regards to ARIA occurrence.

Fifty-seven patients received ATT (lecanemab and donanemab) from 01/01/2024 to 08/31/2025 for an average of 13.31 treatments over an average duration of 214 days at University Hospitals Cleveland Medical Center. Data regarding baseline blood pressure and anti-hypertensive medication use were abstracted from patients’ medical records and examined for associations with ARIA.

Thirty-one patients (54.3%) received lecanemab and 26 (45.6%) received donanemab. ARIA occurred in 22 patients (38.6%), with one patient experiencing symptomatic ARIA (1.7%). Although overall ARIA rates were comparable between the two drugs, ARIA-H was more frequent in patients receiving lecanemab compared to donanemab (45% vs 15%, $p=0.022$) (**Fig 1**). All cause ARIA, ARIA-H, and ARIA-E, were not associated with baseline systolic blood pressure, nor were they associated with anti-hypertensive medication use, the number of anti-hypertensive medications, or the class of anti-hypertensive medication used (**Fig 2**).

In this memory clinic population, occurrence of ARIA was not associated with baseline systolic blood pressure or anti-hypertensive use, despite clinical trial findings that suggest these variables may affect risk. Our study is limited by a small sample size as well as relatively well-controlled blood pressure at baseline.

Any ARIA

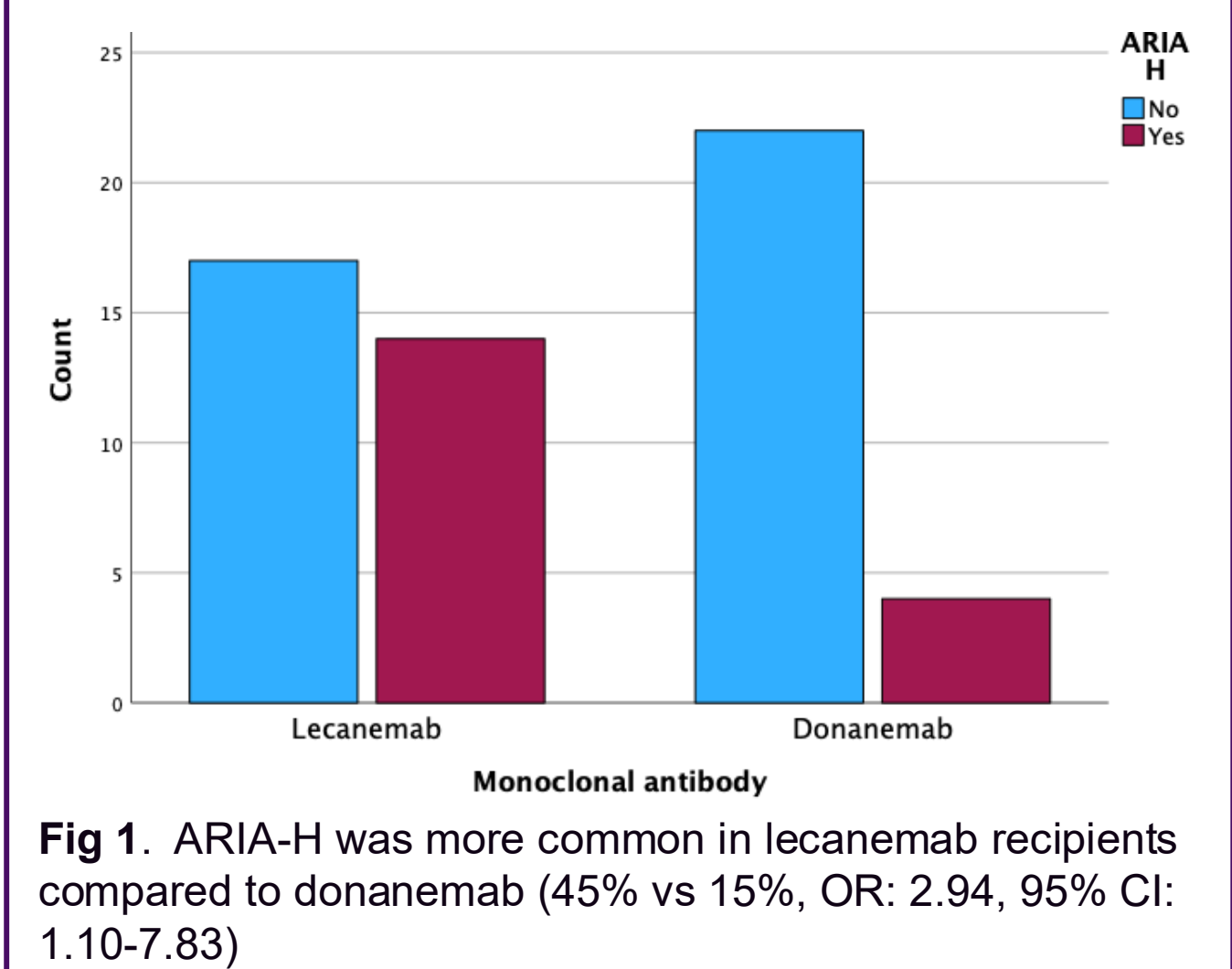
SBP per 10 mmHg	OR 1.13 (0.80-1.60), $p=0.453$
DBP per 10 mmHg	OR 0.87 (0.26-2.94), $p=0.779$
MAP per 10 mmHg	OR 1.12 (0.53-2.34), $p=0.768$
Anti-HTN use	OR 2.05 (0.63-6.70), $p=0.234$

ARIA-E

SBP per 10 mmHg	OR 1.29 (0.80-2.06), $p=0.295$
DBP per 10 mmHg	OR 0.87 (0.24-3.16), $p=0.838$
MAP per 10 mmHg	OR 1.26 (0.51-3.63), $p=0.534$
Anti-HTN use	OR 2.24 (0.36-13.90), $p=0.389$

ARIA-H

SBP per 10 mmHg	OR 0.98 (0.44-1.50), $p=0.934$
DBP per 10 mmHg	OR 0.98 (0.41-2.36), $p=0.964$
MAP per 10 mmHg	OR 0.97 (0.42-2.22), $p=0.934$
Anti-HTN use	OR 1.86 (0.52-6.62), $p=0.335$



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