

# Persistence and adherence with dupilumab therapy in patients with atopic dermatitis: A single-center experience

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## Background

Atopic dermatitis (AD) is a chronic inflammatory skin disease that can be persistent and require long-term treatment in order to maintain adequate disease control. Dupilumab is the first biologic agent approved for the treatment of moderate-severe AD. However, few studies have examined the long-term drug persistence of dupilumab. Further, few studies have examined adherence to dupilumab for AD.

## Research Objectives

To evaluate the persistence (drug-survival) and adherence to dupilumab in patients with moderate and severe AD.

## Methods

A prospective, dermatology practice-based study was performed. Children and adult patients with moderate to severe AD who initiated dupilumab between April 2017 and September 2019 were followed up until their last date of visit or disenrollment. First date of dupilumab administration was considered the index date. Kaplan-Meier analysis was used to estimate dupilumab persistence at 12, 24 and 36 months. Adherence to dupilumab therapy was assessed by self-report using a standardized survey.

Variable	Value
Age (Years) – Mean ± SD	41.1 ± 16.9
Sex – No. (%)	
Male	46 (42.2%)
Female	58 (53.2%)
Insurance – No. (%)	
Private	91 (83.5%)
Public	11 (10.1%)
Uninsured	1 (0.9%)
Race – No. (%)	
White	54 (49.5%)
Non-white	48 (44.0%)
EASI – Mean ± SD	23.3 ± 15.5

Table 1. Baseline characteristics.

Variable	Value
IGA – Mean ± SD	2.7 ± 1.3
NRS worst-itch – Mean ± SD	5.9 ± 3.0
Self-reported AD Severity – Mean ± SD	2.8 ± 1.2

## Results

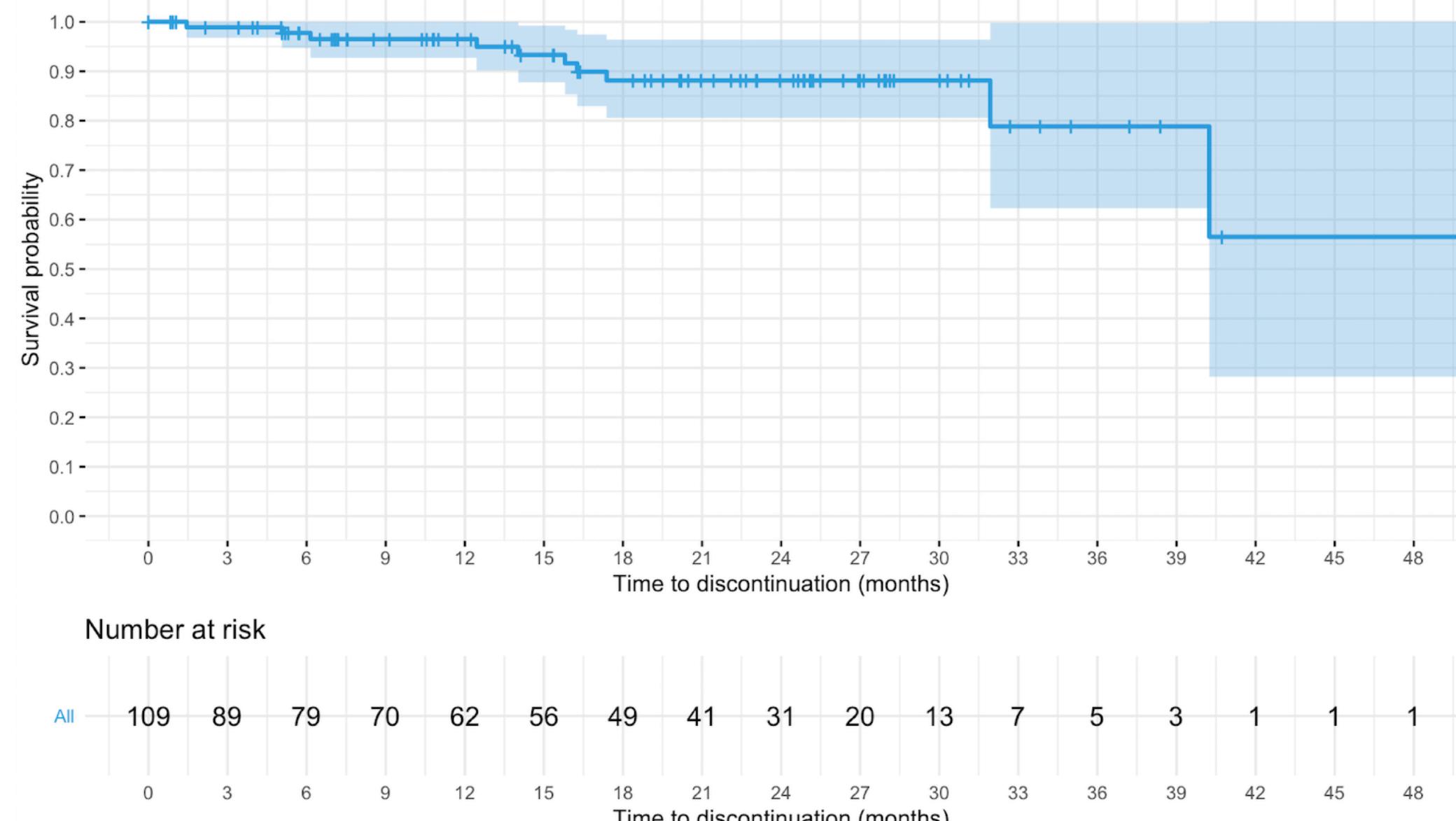


Figure 1. Kaplan-Meier survival analysis showing estimated persistence with dupilumab therapy. Blue shading indicates 95% confidence interval.

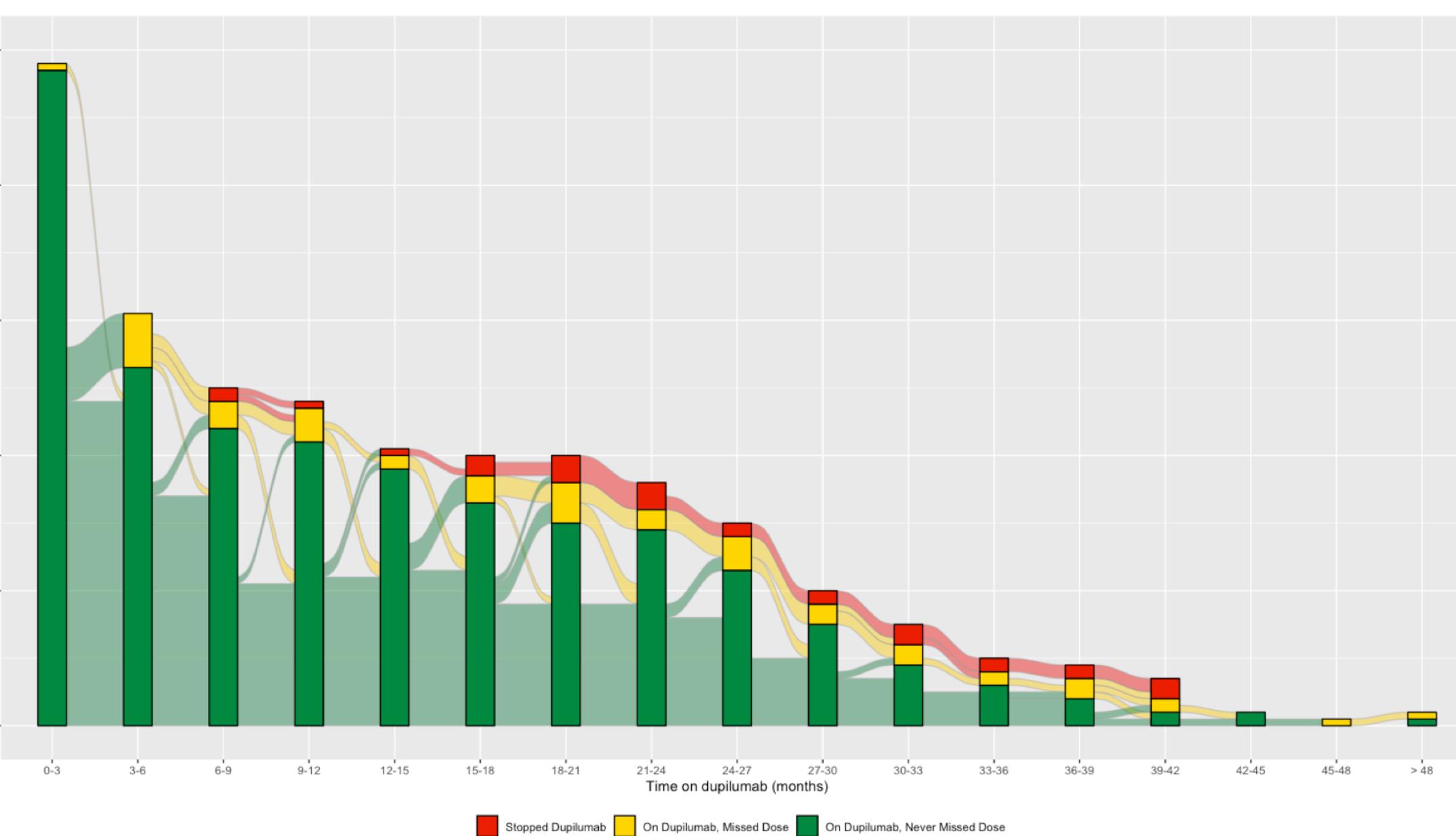


Figure 2. Sankey diagram showing fluctuation of dupilumab persistence across visits. Width of the flow bar indicates the proportion of patients going into the next time interval.

- Overall, 109 children and adult patients with moderate-severe AD were treated with dupilumab.
- The proportion (95% CI) of patients with persistence dupilumab treatment at 12, 24, and 36 months was 96.5% (92.7%-99.9%), 88.1% (83.9%-98.5%) and 78.9% (64.4%-99.9%), respectively.
- Among patients with interrupted treatment, 5 (50%) were insurance-related, 2 (20%) were due to disease clearance and 3 (30%) were due to adverse events.
- Five (50%) of the patients with interrupted dupilumab therapy eventually reinitiated treatment (mean ± SD time to reinitiation:  $1.88 \pm 0.97$  months).
- Adherence to dupilumab therapy was generally high, though decreased slightly over time ( $\geq 1$  missed dose at 0-3 months: 4.3%, 3-6 months: 13.1%, 9-12 months: 10.4%, >12 months: 10.4%).
- Of those who discontinued at 12 months, 100% had severe EASI, IGA and NRS-itch scores, and 50% had severe self-reported global AD severity at baseline.

## Conclusions

- Dupilumab persistence was generally high at 12, 24 and 36 months.
- Approximately 20% of patients had interruptions of therapy by 36 months of continuous treatment.
- These results suggest that dupilumab was overall well-tolerated and effective over time in patients with moderate-severe AD.

## Acknowledgements

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