

Title: Persistence and adherence with dupilumab therapy in patients with atopic dermatitis (AD): A single-center experience

Authors: Mindy R. Hong, PhD, MSPH¹, Jonathan I. Silverberg, MD, PhD, MPH^{1,2}

¹ Department of Dermatology, Northwestern University School of Medicine

² Department of Dermatology, George Washington University School of Medicine and Health Sciences

Background: Little is known about long-term persistence and adherence with dupilumab therapy for atopic dermatitis (AD). This study aimed to assess persistence (drug-survival) and adherence to dupilumab in patients with moderate to 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.

Results: Overall, 109 children and adult patients with moderate-severe AD were treated with dupilumab. The mean \pm SD age at enrollment was 41.1 ± 16.9 years. The proportion (95% confidence interval) of patients with persistent 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 these patients with interrupted dupilumab therapy eventually reinitiated treatment (mean \pm SD time to reinitiation: 1.88 ± 0.97 months). Adherence to dupilumab therapy was generally high, though decreased slightly over time (≥ 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.

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