Dupilumab reduces the number of lesions in adult patients with prurigo nodularis presenting with multiple lesion morphologies: pooled results from two phase 3 trials (LIBERTY-PN PRIME and PRIME2)

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**Introduction/Background:**

Prurigo nodularis (PN) is a chronic inflammatory skin disease characterized by itchy skin lesions presenting as nodules, papules, plaques, or ulcers. These different clinical morphologies may present simultaneously and an individual patient may exhibit different morphologic variants over time. Dupilumab is the first systemic treatment approved by the US Food and Drug Administration and European Medicines Agency for the treatment of adults with PN. LIBERTY-PN PRIME (NCT04183335) and PRIME2 (NCT04202679) were two phase 3 randomized placebo-controlled clinical trials that demonstrated the efficacy and safety of dupilumab in adults with PN inadequately controlled with topical medications or for whom those were inadvisable.

**Objectives:**

To report baseline lesion morphologies and the effect of dupilumab on the number of skin lesions present, as measured by the Prurigo Activity and Severity (PAS) score, in patients with PN presenting with multiple lesion morphologies.

**Methods:**

In LIBERTY-PN PRIME and PRIME2, patients received 300 mg dupilumab subcutaneously (600 mg loading dose; n = 153) or matched placebo (n = 158) every 2 weeks over 24 weeks. PAS, a simplified 5-item questionnaire, was used to assess the types of lesions present (PAS Item 1a) and the numbers of lesions in a representative body area (PAS Item 4). Safety endpoints included treatment-emergent adverse events (TEAEs), and serious adverse events (SAEs). Data from both studies were pooled and comparisons analyzed using analysis of covariance.
Results:

All patients in PRIME and PRIME2 had nodules and an Investigator’s Global Assessment for PN-Stage (IGA PN-S) score of 3 or 4 at baseline. Additional PN lesion types included papules (dupilumab: 69.9%, placebo: 69.4% at baseline), hypo- or hyper-pigmented macules (dupilumab: 50.3%, placebo: 55.4%), plaques (dupilumab: 30.7%, placebo: 39.5%), and ulcers (dupilumab: 32.0%, placebo: 28.7%). At least 2 types of lesions at baseline were reported by 77.1% of the dupilumab group and 79.0% of the placebo group, while 10.5% of the dupilumab and 13.4% of the placebo group reported 5 concomitant lesion types at baseline (nodules, papules, hypo- or hyper-pigmented macules, ulcers, and plaques). After 24 weeks of treatment, 3.3% of patients given dupilumab and 7.6% of patients given placebo reported 5 types of concomitant lesions. Dupilumab reduced the overall number of lesions (SD) in a representative area of the body by 61.1% (45.7) at Week 24, compared with a 22.9% (63.3) reduction in the placebo group. Treatment-emergent adverse events (TEAEs) occurred in 91 (59.9%) and 80 (51.0%) patients from the dupilumab and placebo groups, respectively. TEAEs leading to discontinuation occurred in 0 patients given dupilumab and 3 (1.9%) given placebo.

Conclusions:

Patients with PN experienced a high baseline lesion burden; >75% of patients reported ≥2 types of concomitant lesions, and >10% of patients reported 5 types of concomitant lesions.
Dupilumab treatment reduced the number of lesions and the percentage of patients reporting 5 concomitant lesion morphologies. Safety data were generally consistent with the known safety profile of dupilumab.

**Keywords** (up to 5 keywords)

Dupilumab, prurigo nodularis, lesions, burden

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