



## Abstract N°: 7862

### Deucravacitinib in the treatment of lichen planopilaris - interim analysis

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#### Introduction & Objectives:

Lichen Planopilaris (LPP) is a form of lymphocyte-mediated scarring alopecia. It presents as discrete patches with characteristic perifollicular erythema and scale involving the scalp. LPP is histopathologically characterized by lichenoid inflammation at the infundibular portion of a hair follicle. Cutaneous Lichen Planus (LP) is characterized by a Type I and Type II IFN driven cell mediated cytotoxic immune response that is highly responsive to JAK1, 2 inhibitions 1-3. However, unlike LP, LPP is a chronic, scarring condition. The etiology of LPP as well as the scarring is poorly understood; however, Th17 cells are thought to play a critical role in this process. TYK2 activates STAT-dependent gene expression and functional responses of interleukin (IL)-12, IL-23, and type I interferon (IFN) receptors. IL-12 promotes Th1 differentiation in T-cells and enhances the production of IFN gamma 4. Deucravacitinib is an oral selective inhibitor of tyrosine kinase 2 (TYK2), a member of the Janus kinase (JAK) family. Our aim is to evaluate the safety and efficacy of Deucravacitinib in LPP as assessed by the change in Physician Global Assessment (PGA) and the Lichen Planopilaris Activity Index (LPPAI) of the hair. Herein, we report the interim 12- and 16-week data of an open label study of Deucravacitinib in LPP.

#### Materials & Methods:

This study (NCT-06091956) included patients over the age of 18 with biopsy proven, active LPP. Patients with end-stage scarring hair loss but without significant active disease were excluded. Prior treatments were allowed; however, a washout period of 2 weeks for topical and 4 weeks or longer for systemic agents was required. Patients were treated with Deucravacitinib 6 mg twice daily. Patients were evaluated every 4 weeks and assessed by PGA, LPPAI, Dermatology Life Quality Index (DLQI), Visual Analogue Score (VAS), Visual Rating Score (VRS), Numerical Rating Scale (NRS), Skindex-16, photographs and safety monitoring between weeks 0-24 (primary endpoint week 24). Therapy was stopped at week 24 and patients were evaluated at week 28 with continued assessment and laboratory monitoring.

#### Results:

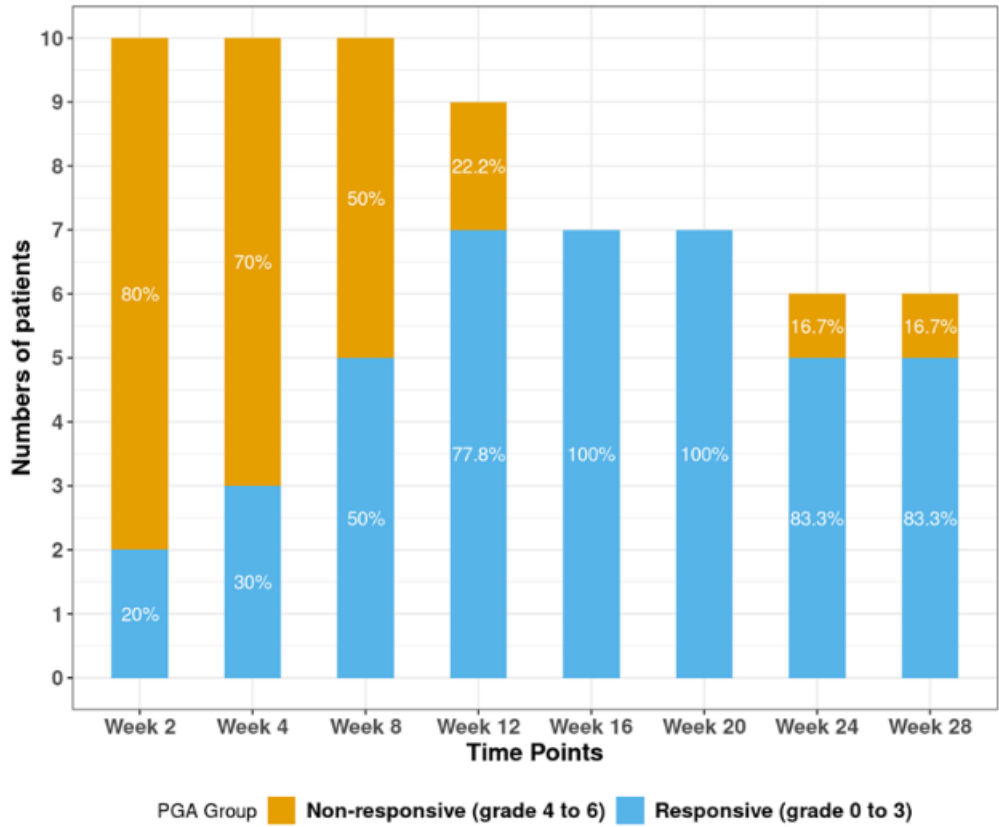
Patients (N=10) had a mean (SD) age of 61.4 (11.7) years, 70 % were female, and 100% were White. Baseline mean (SD) Lichen Planopilaris Activity Index (LPPAI), Dermatology Life Quality Index (DLQI), Visual Analogue Score (VAS), Numerical Rating Scale (NRS), and Skindex-16 scores were 3.8 (1.2), 3.8 (2.0), 3.4 (2.4), 4.2 (2.4), and 36.3 (18.6) respectively; the median (range) disease duration was 6.4 (1.67-15) years, and 100% of patients received prior treatment for LPP. The mean (SD) number of treatments prior to Deucravacitinib treatment for LPP was 4.1 (1.8). The mean (SD) number of systemic treatments prior to Deucravacitinib treatment for LPP was 1.7 (1.3). At Week 12 and 16 compared to baseline, there was a significant improvement in LPPAI (2.1-point decrease at week 12 p=0.004 and 2.4-point decrease at week 16 p=0.016). Deucravacitinib was well tolerated, with no drug related, serious treatment-emergent adverse events (TEAEs), or TEAEs leading to discontinuation. There was a statistically significant improvement with PGA response rates compared to week 2 (N=10, 20%) at Week 12 (N=9,

77.8%, p=0.034) and Week 16 (N=7, 100%, p=0.008).

**Conclusion:**

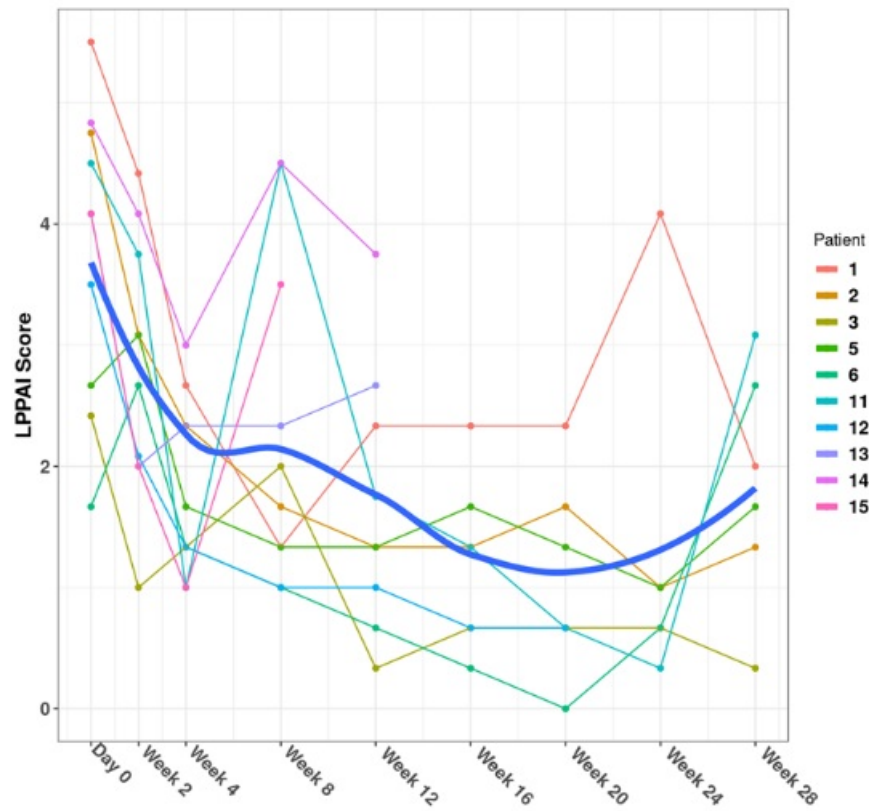
This was the first clinical trial to investigate a selective TYK2 inhibitor in LPP. Patients with LPP experienced improvements in PGA and LPPAI. Future studies and clinical trials are warranted.

**Figure 1.** Physician Global Assessment (PGA) percentage by time points



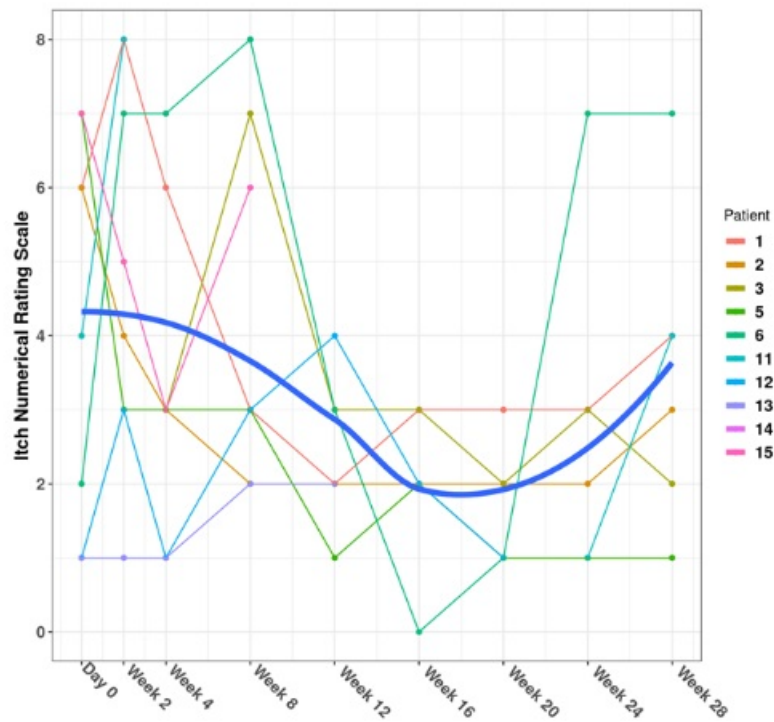
**Figure 1.** Bar plots for Physician Global Assessment (PGA) binary group over time.

**Figure 2.** Lichen Planopilaris Activity Index (LPPAI) Score by time points



**Figure 2.** Spaghetti plot for the Lichen Planopilaris Activity Index (LPPAI) score at each time point for each patient. The bold blue line is the overall trend.

**Figure 3.** Numerical Rating Scale (NRS) Score by time points



**Figure 3.** Spaghetti plot for the Numerical Rating Scale (NRS) score at each time point for each patient. The bold blue line is the overall trend.

#### References:

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