

# Multimodal assessments of the treatment response of guselkumab in mild psoriasis patients: an exploratory randomized placebo-controlled clinical trial

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## Introduction

- Moderate-to-severe psoriasis are increasingly well-managed as safe and efficacious therapeutics are available.
- Fewer patients are eligible for clinical trials
- Mild psoriasis patients might be a suitable alternative population presuming treatment responses can be demonstrated.

## Aim

To characterize with multimodal imaging the treatment effect of guselkumab in mild psoriasis patients with a moderate target plaque.

## Methods

- 20 mild and 6 moderate-to-severe patients with PASI of  $\leq 5$  and  $\geq 10$ , respectively.
- Randomized to standard-of-care guselkumab 100 mg or placebo (3:1)
- Monitored for 24 weeks:
  - Clinician-reported outcomes: PGA, PASI, PASI-HD, TSS.
  - Digitalized endpoints target lesion: multispectral imaging (MI), optical coherence tomography (OCT) and laser speckle contrast imaging (LSCI).

## Results

- PASI-scores significant decrease compared to placebo in mild ( $p=0.009$ ) and moderate-to-severe treatment group ( $p<0.0001$ ) (figure 1). TSS significantly decreased during treatment ( $p<0.004$ ).
- Significant decreases in erythema ( $p<0.009$ ) in MI (figure 2) cutaneous perfusion ( $p<0.001$ ) (figure 3A) in LSCI and epidermal thickness ( $p<0.002$ ) in OCT (figure 3B), in both guselkumab-treated groups.

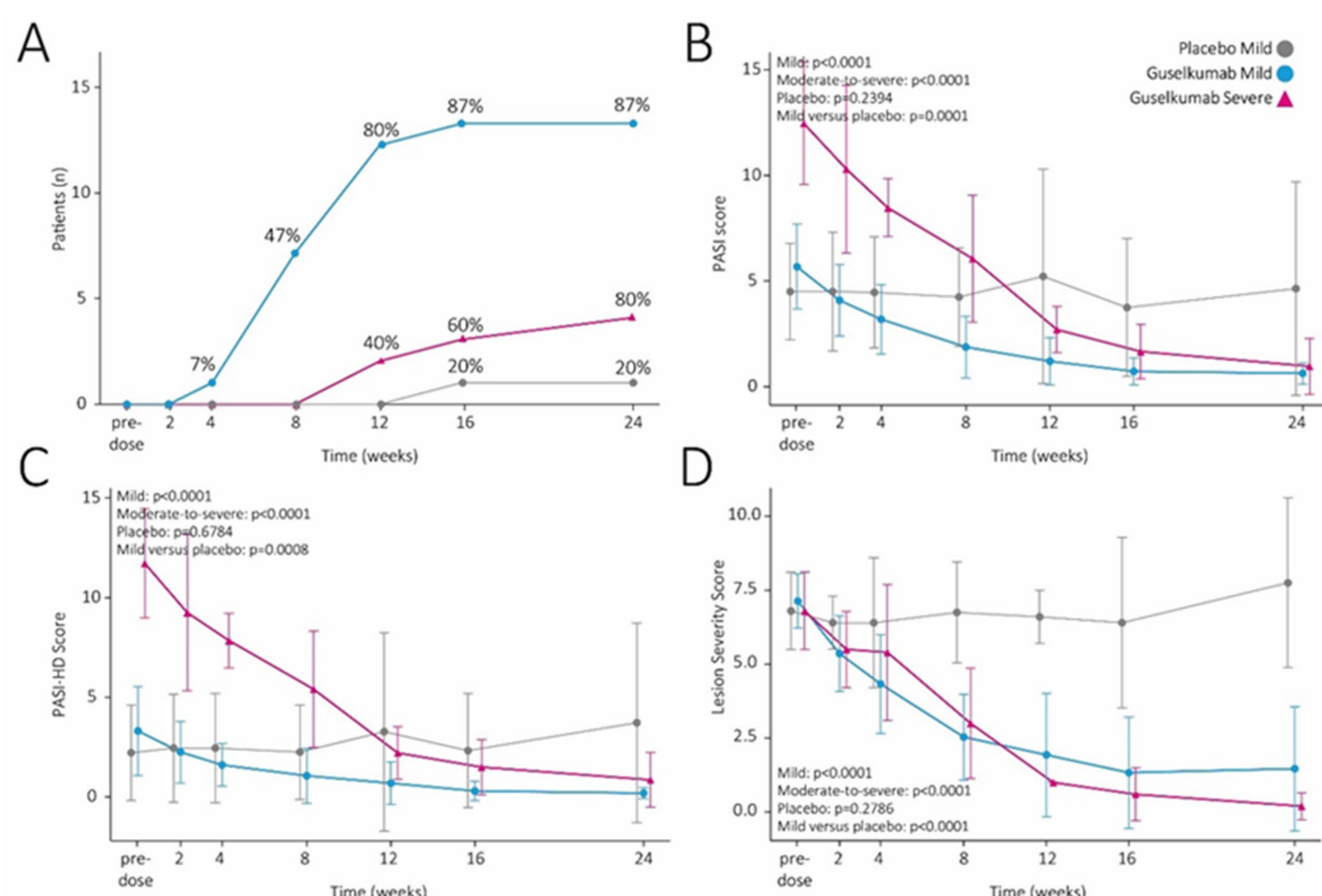


Figure 1: Severity scoring of psoriasis (PGA) of clear or almost clear (0/1) (A), (PASI) (B) and (PASI-HD) (C), Target lesion severity score (D).

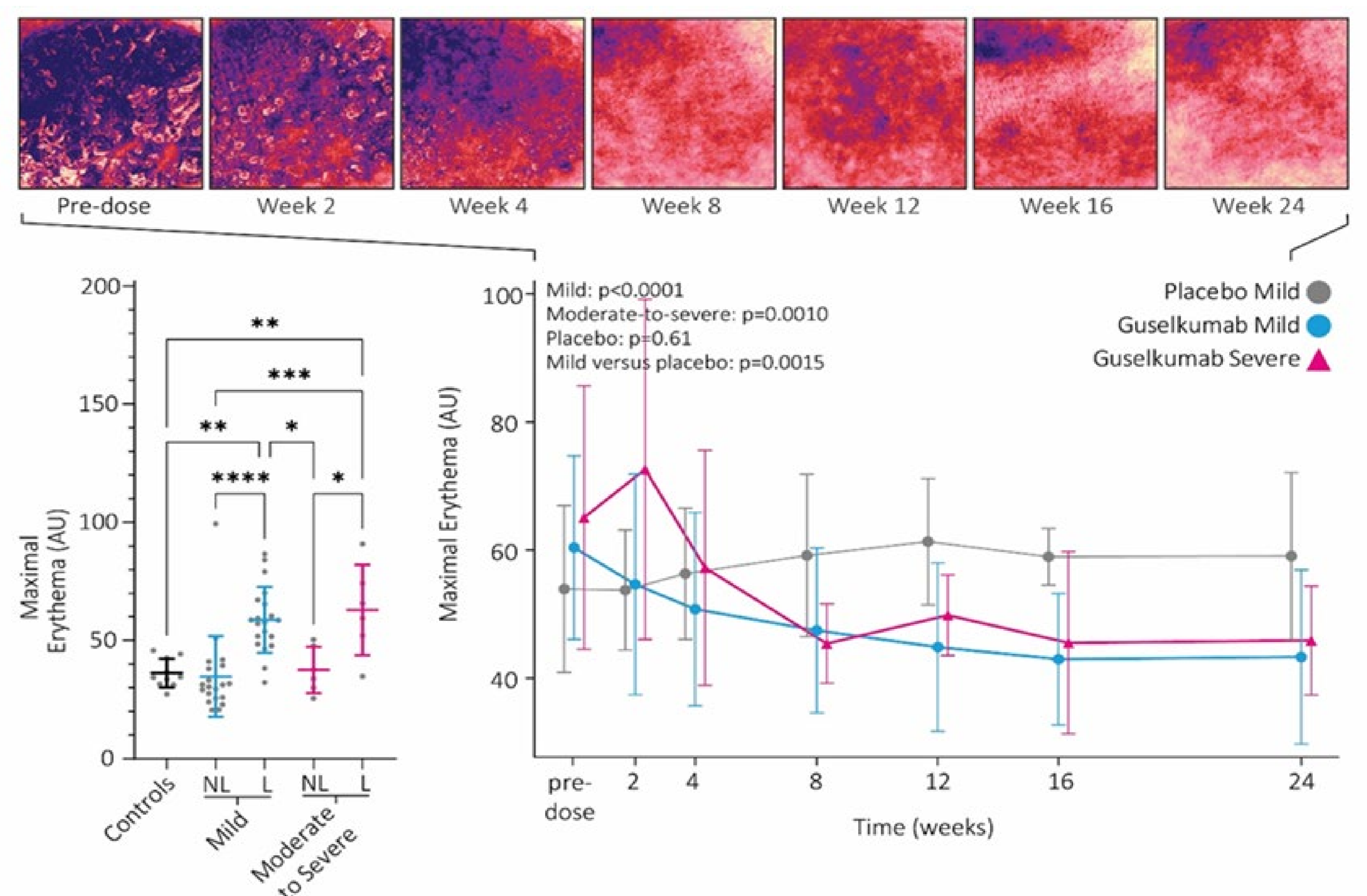


Figure 2: Multispectral imaging for the determination erythema.

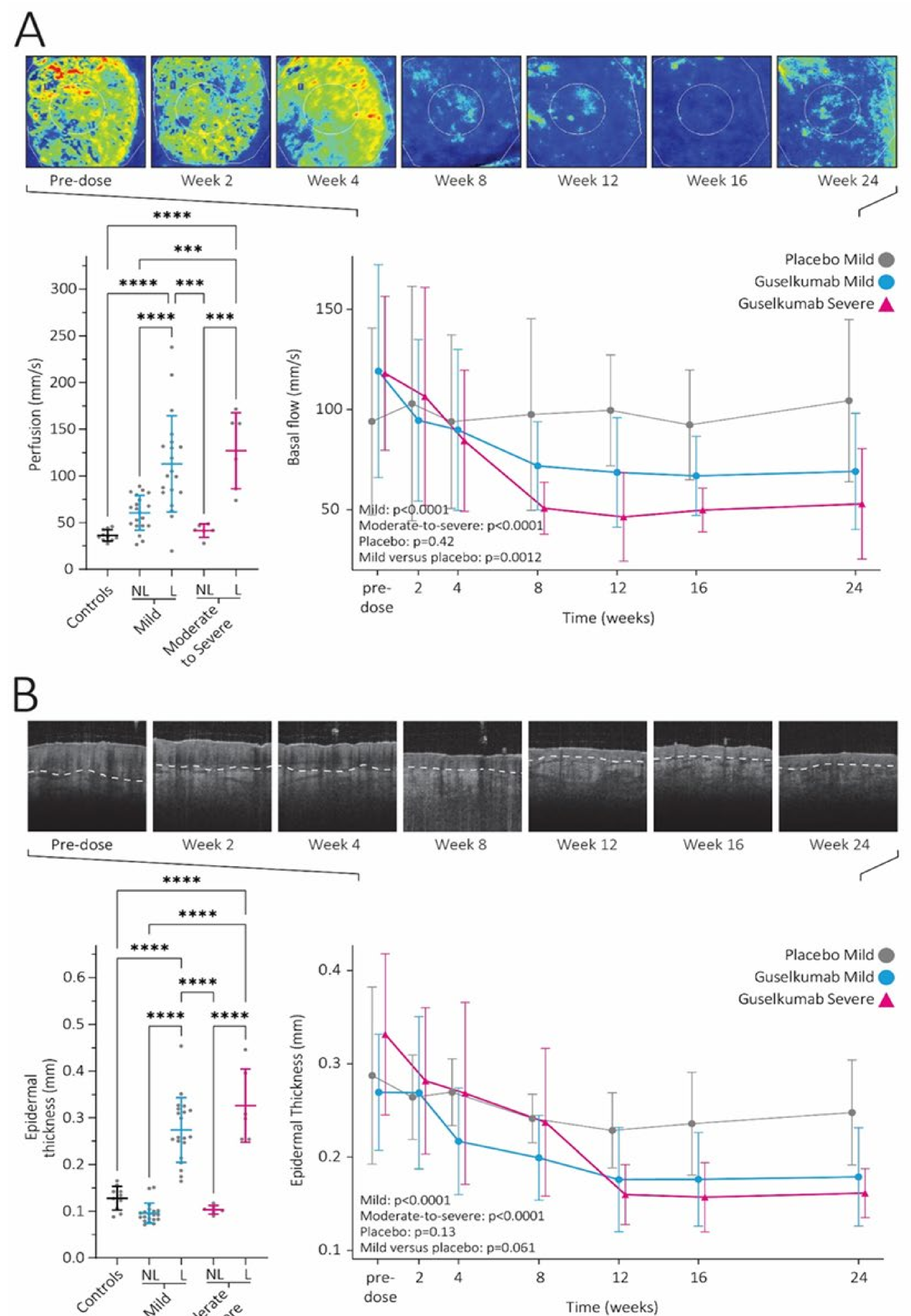


Figure 3: Baseline differences and longitudinal monitoring of cutaneous perfusion by laser speckle contrast imaging (A) and epidermal thickness by optical coherence tomography (B).

## Conclusions

Total body clinical scoring and target lesion monitoring enable the detection of a treatment effect in mild psoriasis patients. Although this trial was not powered to demonstrate equivalence between severity groups, results indicate treatment responses follow the same trend in mild and moderate-to-severe patients.



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