THERAPEUTIC DRUG MONITORING: THE WAY TOWARDS INDIVIDUALIZED DOSING OF SECUKINUMAB IN CHRONIC PLAQUE PSORIASIS

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INTRODUCTION
- With the newest biologicals, such as secukinumab, achieving (almost) complete skin clearance (PASI ≤ 2) must be sought in psoriasis patients
- A ‘one size fits all’ dosing regimen is currently applied which may lead to over- and undertreatment
- Therapeutic drug monitoring (TDM) is defined as the measurement of serum drug concentration

OBJECTIVE
To define a therapeutic window of secukinumab concentrations that can be targeted in order to achieve optimal clinical response in psoriasis patients.

RESULTS
Correlation between secukinumab concentration and absolute PASI

- Figure 1. Secukinumab concentration (µg/ml) and PASI score at trough. Mixed effect model, p = 0.001
- Figure 2. Secukinumab concentration (µg/ml) grouped based on absolute PASI score at trough. Mixed effect model, p < 0.0001

CONCLUSIONS
- An inverse correlation was found between secukinumab trough concentrations and clinical response
- Optimal responders have higher secukinumab trough concentrations compared to suboptimal responders
- An optimal therapeutic window of secukinumab, being 37.3 – 52.3 µg/ml was identified in a psoriasis cohort

Take home message
By identifying a therapeutic window for secukinumab in psoriasis, ranging from 37.3 to 52.3 µg/ml, an essential requirement for implementation of therapeutic drug monitoring in the clinical practice is achieved.

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