

Poster n° 1



## DERMATOLOGY RESEARCH UNIT

# **EXPLORING THE EXPOSURE-RESPONSE RELATIONSHIP OF GUSELKUMAB IN CHRONIC**

# **PLAQUE PSORIASIS: PRELIMINARY RESULTS**

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## **MATERIALS AND METHODS**

75 adult patients with psoriasis vulgaris



Guselkumab 100 mg at week 0, week 4 and every 8 weeks thereafter (standard dosing)



Multiple blood sampling at trough (cross sectional time points during induction and maintenance)

<u>AIM</u>

To explore the exposure-response relationship of guselkumab in a real-life setting.



In-house developed guselkumab ELISA (KU Leuven) - DOI: 10.1016/j.jpba.2020.113433



Clinical response evaluated with Psoriasis Area and Severity Index (PASI)



Figure A. Exposure-response relationship of	Figure B. Exposure-response relationship of guselkumab	PASI≤2, is presented against the guselkumab trough
auselkumab on week 4 after treatment initiation.	durina maintenance (≥ 20 weeks on auselkumab).	concentrations (TCs). Patients achieving optimal (green dots)
Difference in auselkumab trough concentrations	Difference in auselkumah trough concentrations hetween	or suboptimal (red dots) response when having certain
between ontimal and subontimal responders at week	ontimal and subontimal responders in maintenance	secukinumab TC at steady state are plotted. Observed and
$\Delta$ Ontimal response is defined as $P\Delta SI < 2$	Ontimal response is defined as PASI < 2	predicted fractions of patients achieving optimal response are
	$Optimul response is defined us rAsi \leq 2.$	presented by green tiles and lines, respectively.

## **CONCLUSIONS**

- > Our preliminary results showed that early differentation (i.e. week 4) between optimal and suboptimal responders can be made based on guselkumab exposure, allowing timely treatment modifications when needed.
- > At steady-state, targeting a guselkumab serum trough concentration of 1.6 μg/ml may be a viable treatment option in suboptimal responders to prevent underexposure and subsequent suboptimal clinical response

Take home message	Contact			
Based on these preliminary results, a guselkumab target trough concentration of 1.6	rani.soenen@uzgent.be			
µg/ml in maintenance could be deduced. In addition, higher guselkumab exposure	<b>F</b> Universiteit Gent			
on week 4 may be a promising early predictor of optimal response.	<ul> <li>@ugent</li> <li>Ghent University</li> </ul>			
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