



Longitudinal Laser - Speckle Contrast Imaging of Skin Microcirculation Dynamics in Atopic Dermatitis during Anti - inflammatory and Emollient Treatment

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Declaration Potential COIs

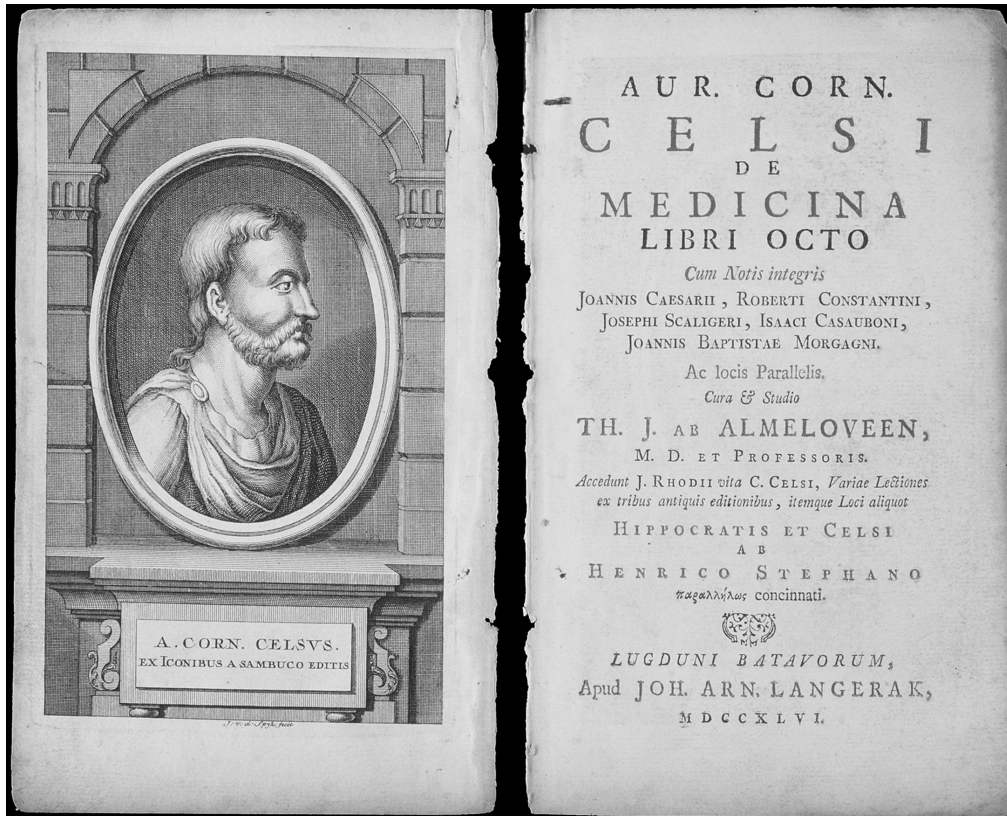
I assure you that the content and presentations in the following slides are the result of efforts to achieve the greatest possible objectivity and that the presentation therefore maintains company and product neutrality!

None of the declared COIs are related to todays talk.

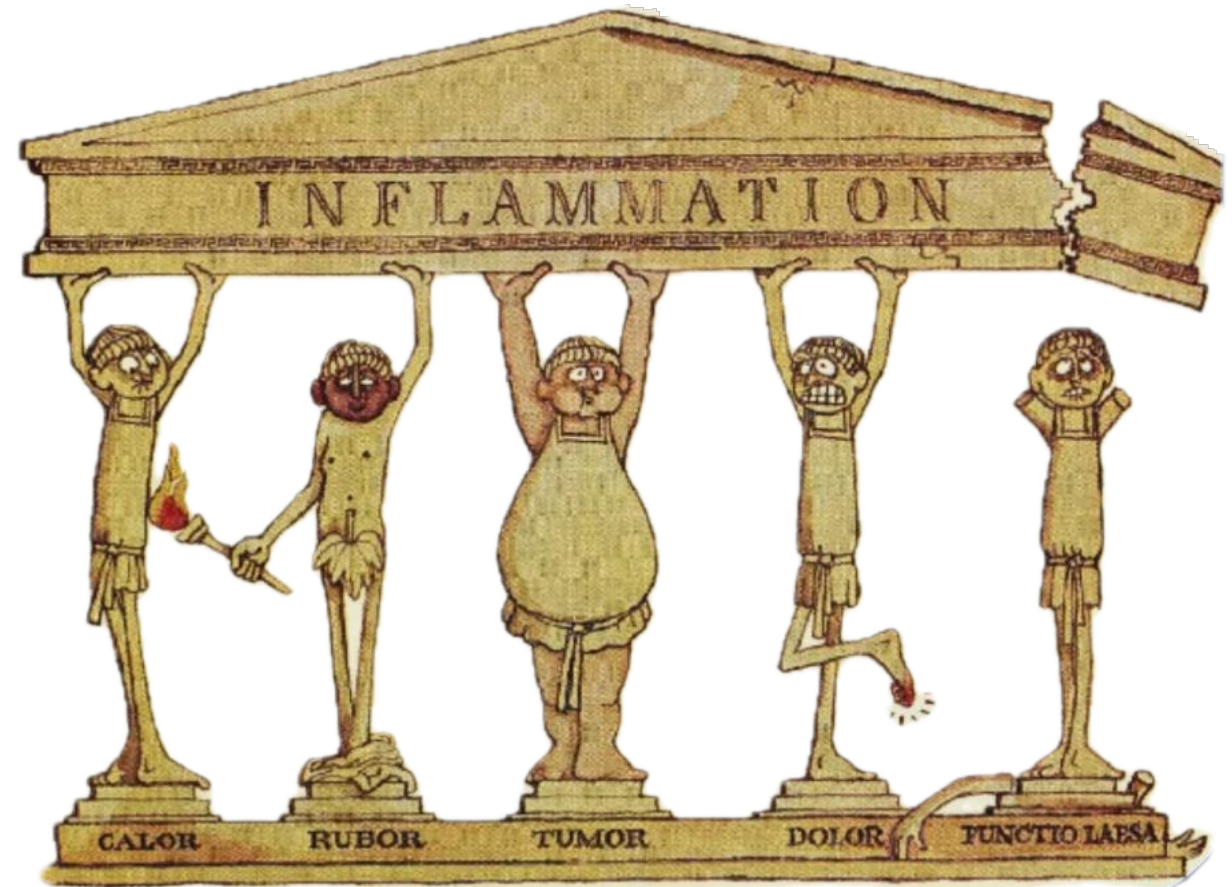
My potential conflicts of interest relate to the following connections and companies within the last 5 years:

Speaker Fees	Novartis
Conference Support	Lilly, Galderma, Leo Pharma, Novartis

Introduction



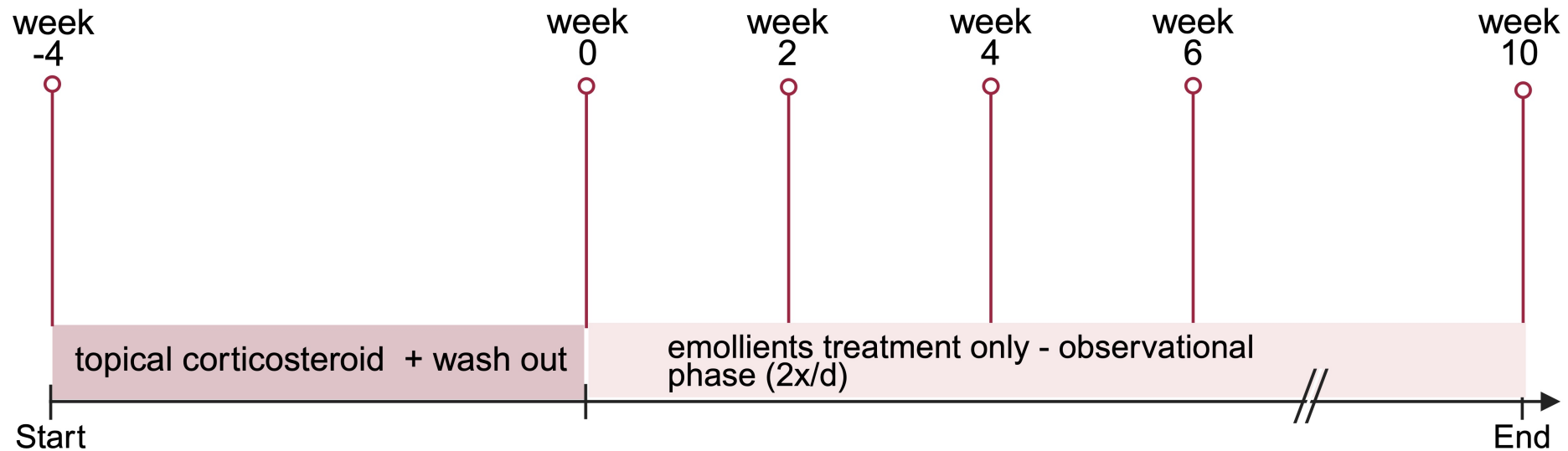
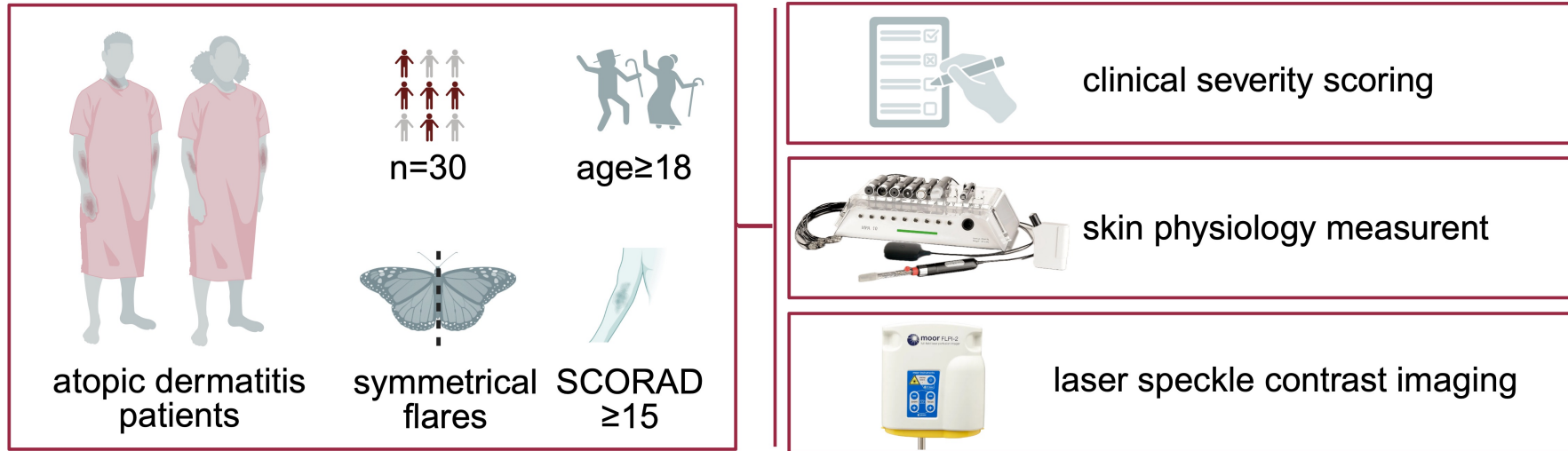
Aulus Cornelius Celsus „De Medicina“
(25 BC - 50 AD)



<https://i.redd.it/2gbzxvnnwelp1.jpeg>

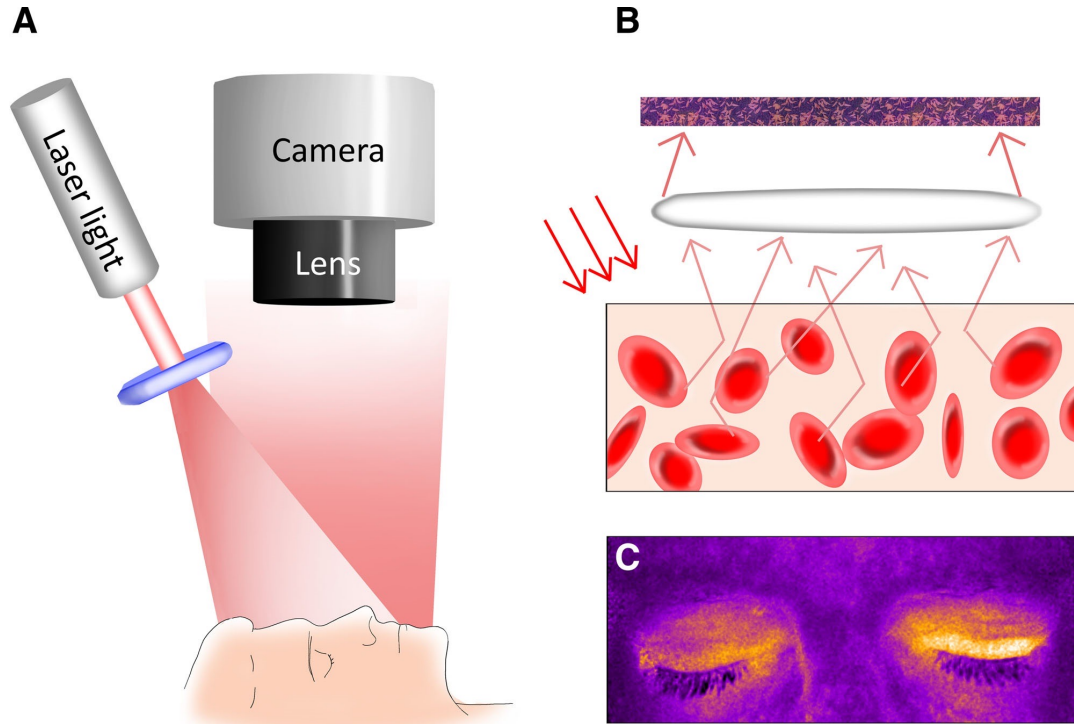
material & methods

study design - scientific questions

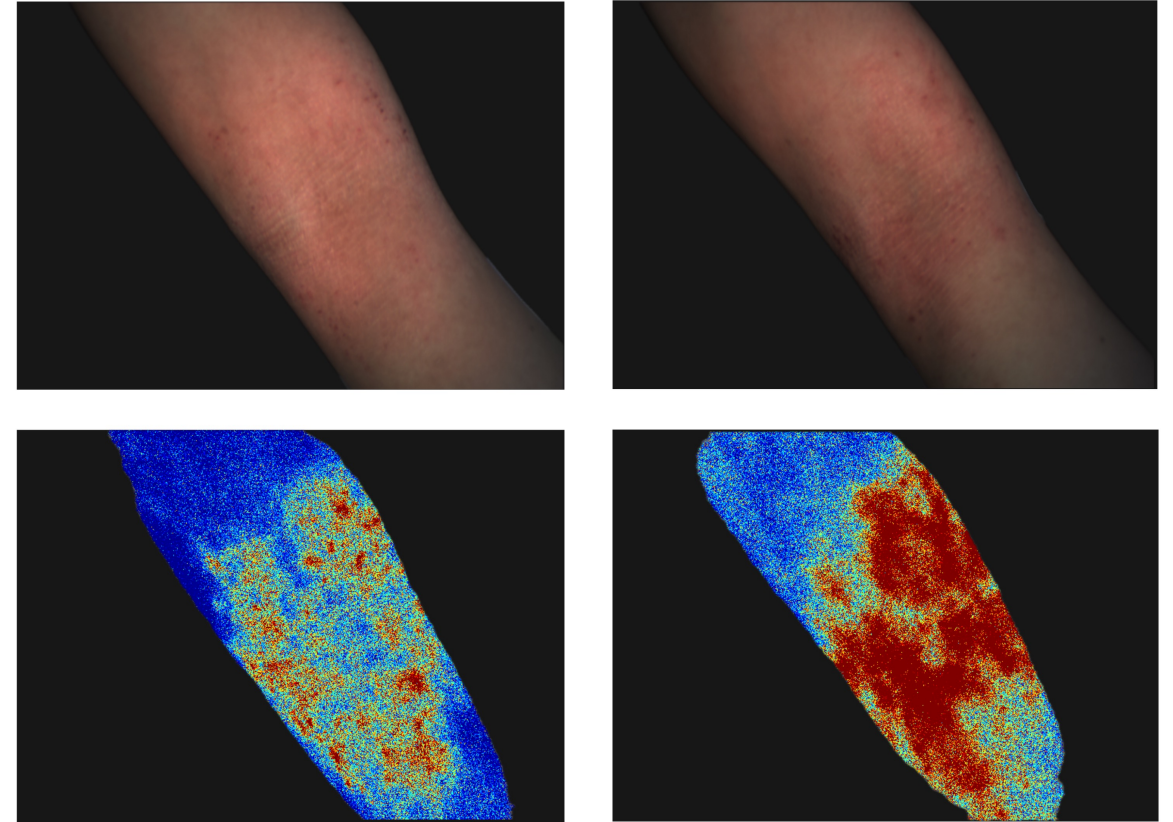


material & methods

Laser-speckle contrast imaging



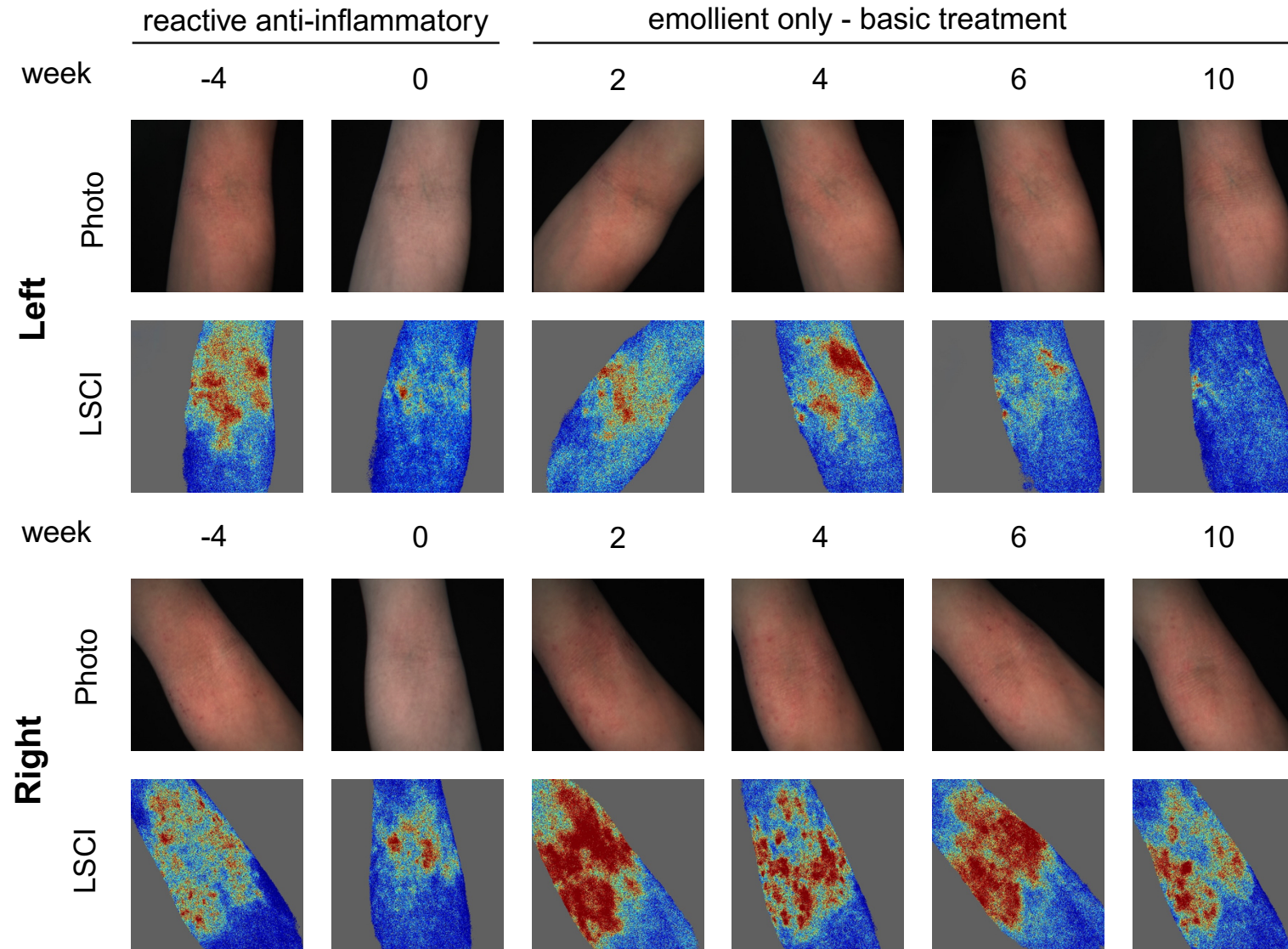
Berggren et al., 2022, *Ophthalmic Plastic and Reconstructive Surgery*



Rohayem et al., unpublished data

results

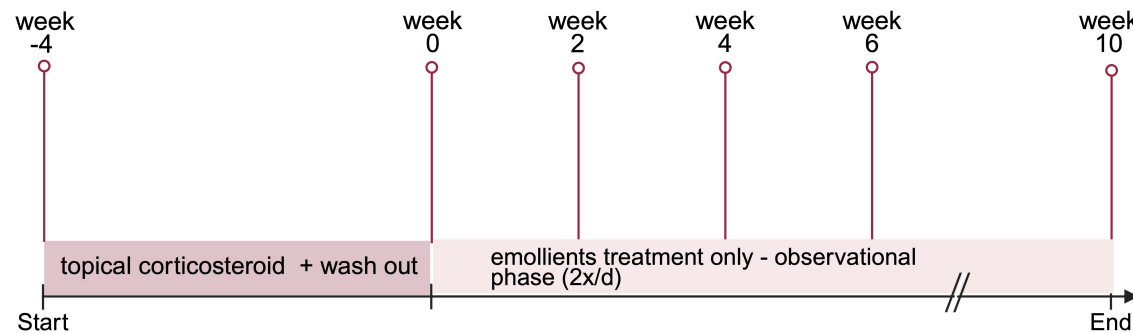
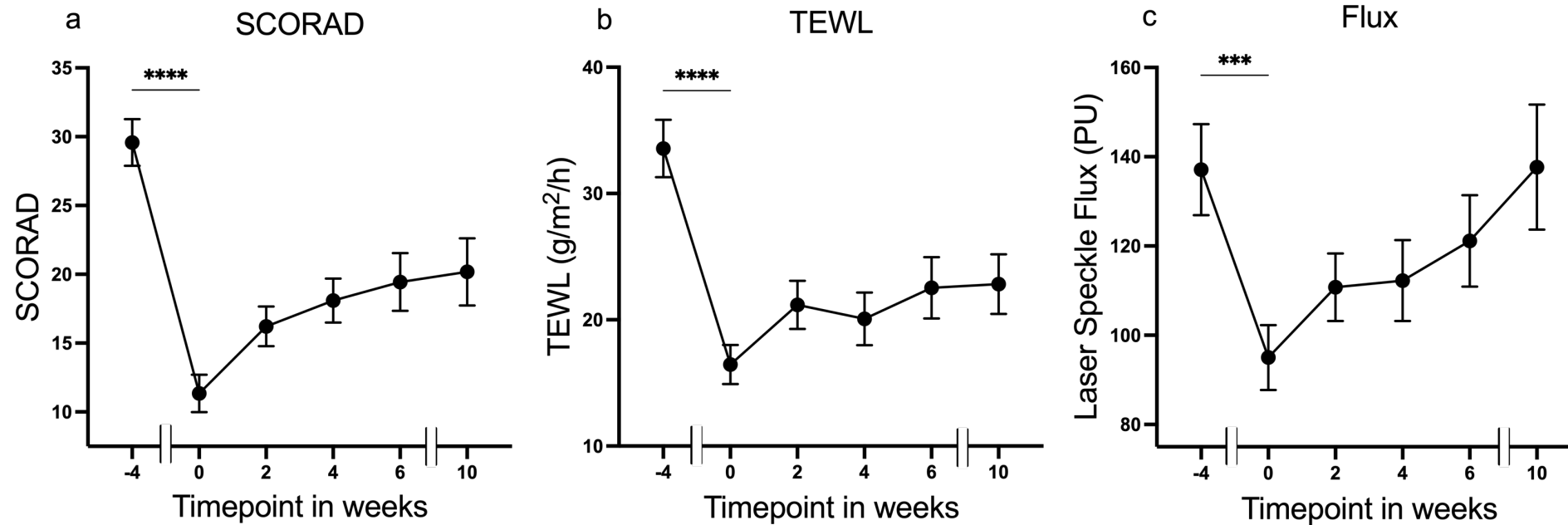
Laser-speckle contrast imaging of AD during treatment and remission



Rohayem et al., unpublished data

results

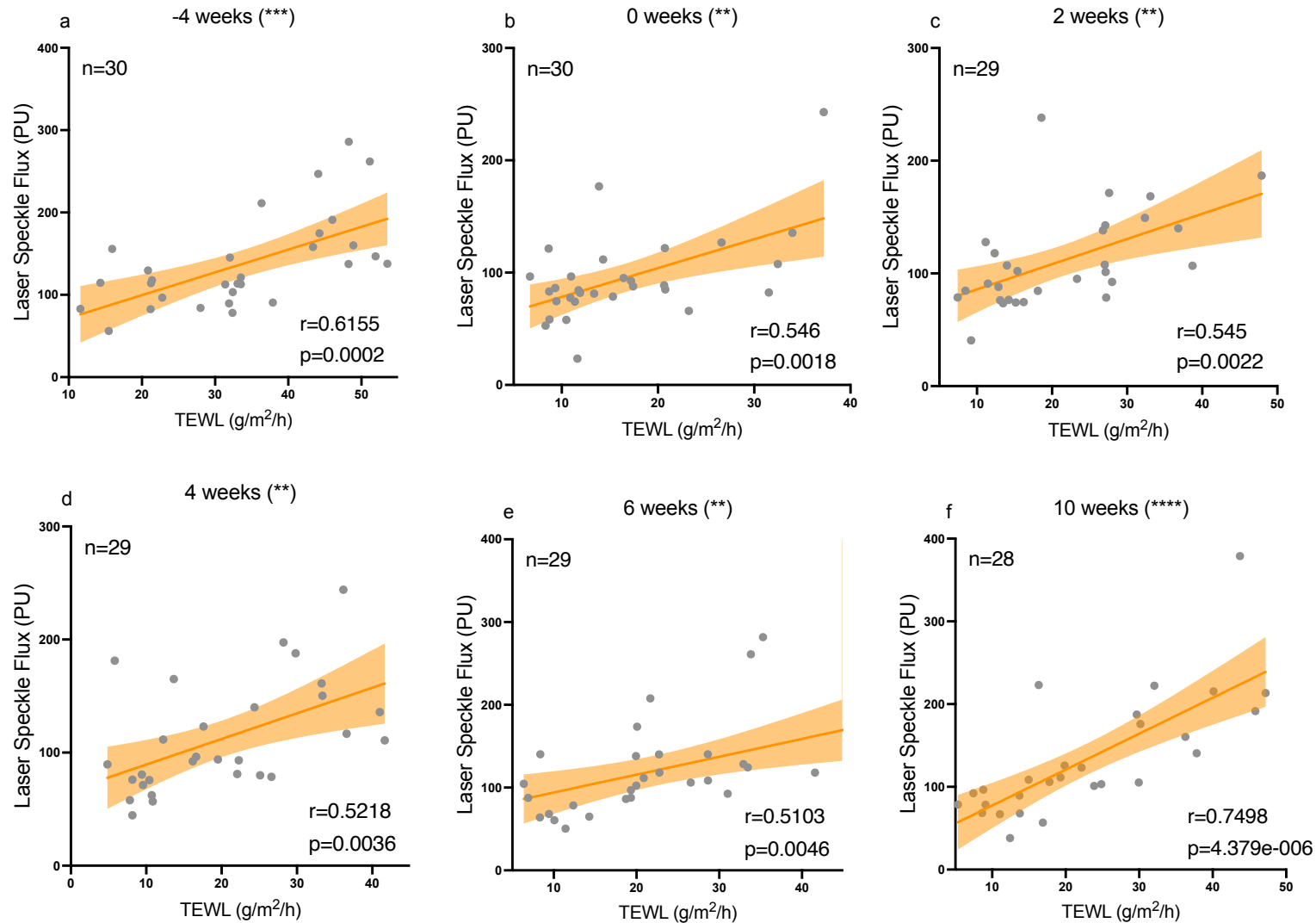
after cessation of treatment patients skin inflammation slowly returns



Rohayem et al., unpublished data

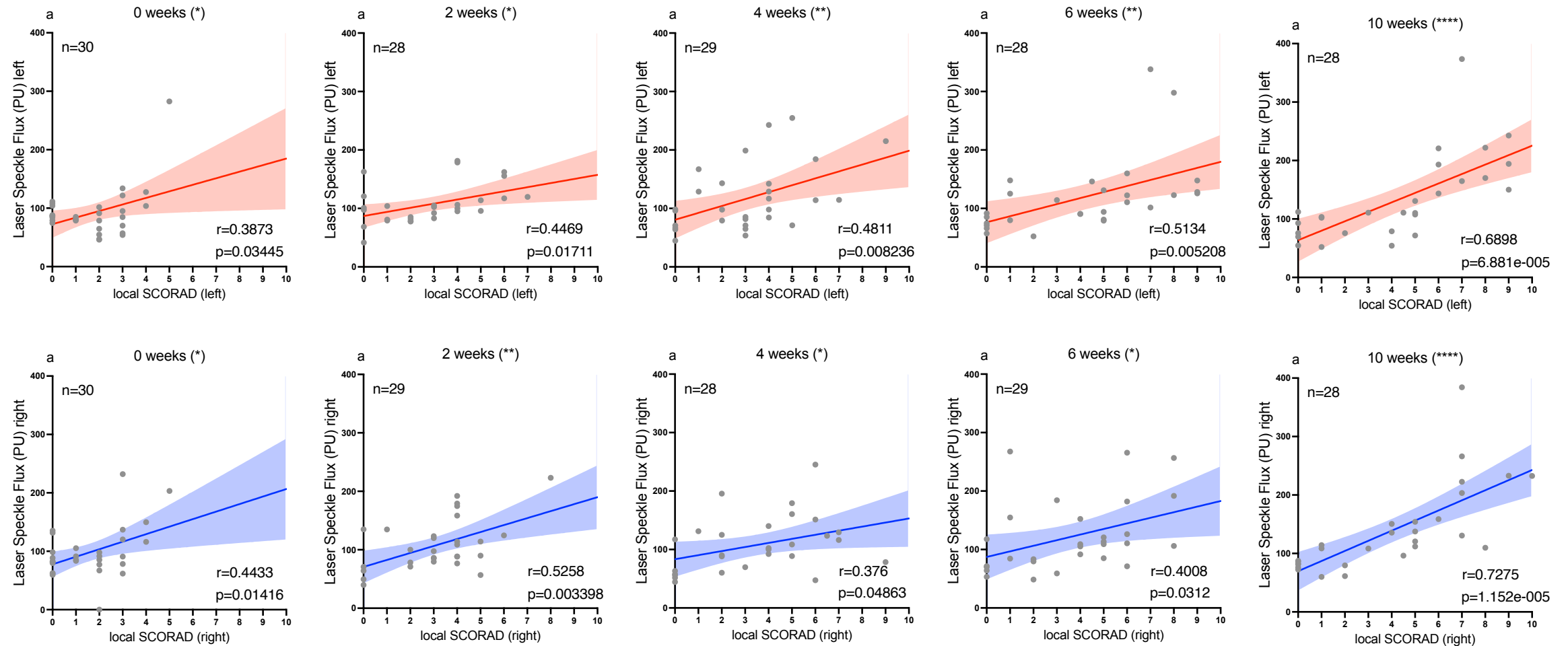
results

LSCI Flux and TEWL significantly correlate throughout the study



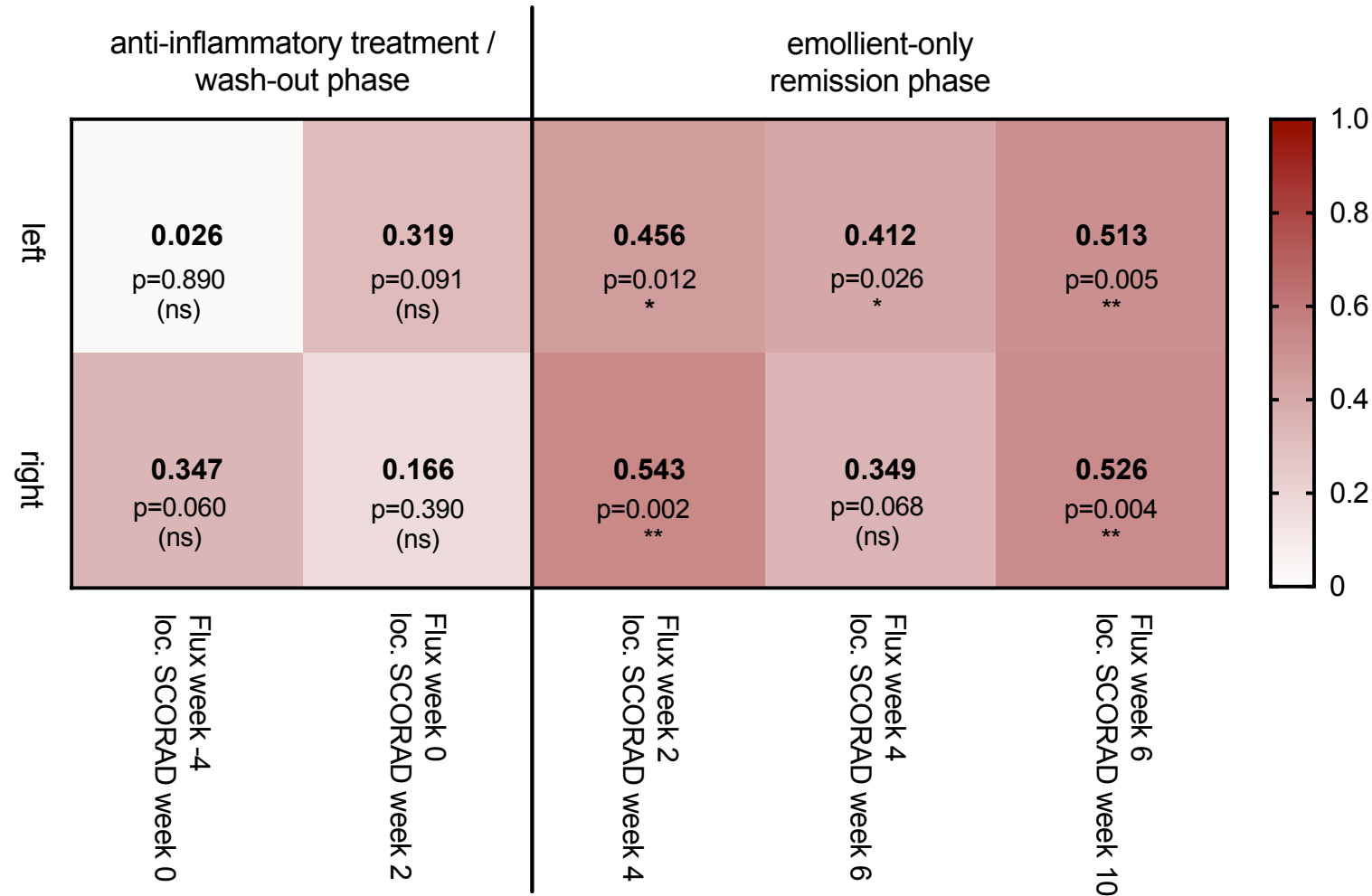
results

LSCI flux and local SCORAD significantly correlate throughout the study



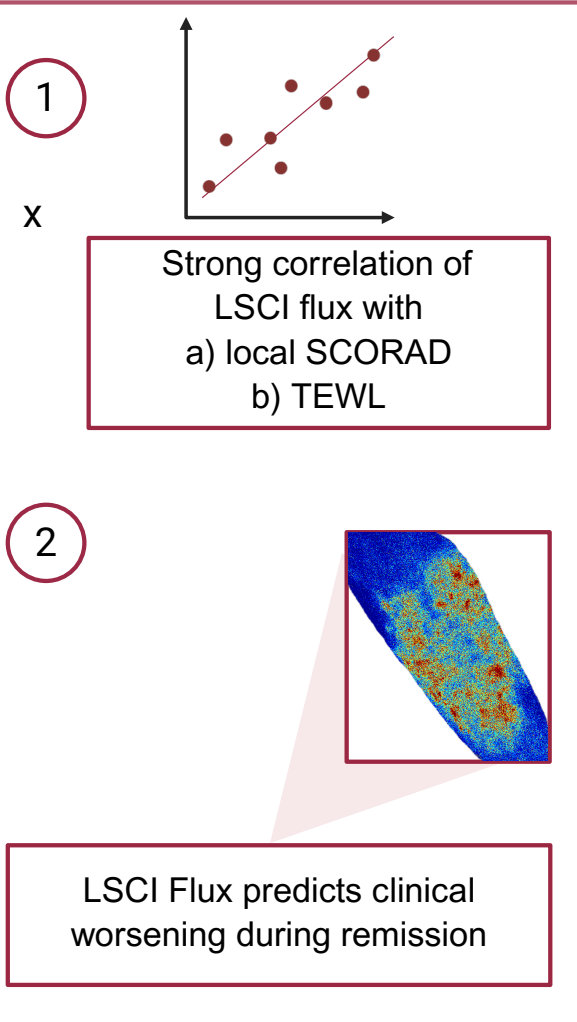
results

LSCI flux predicts increased SCORAD at next visit during remission



Summary

LSCI provides objective and predictive measurement of skin hyperaemia



LSCI could be a non-invasive, objective and cost-efficient way of quantifying inflammatory activity.

Potential applications:

- Objective monitoring of disease activity complementary to clinical evaluation
- Non-invasive measurement of sub-clinical disease activity
- Prediction of flaring during remission, call to action for proactive treatment

Limitation:

- prediction under treatment needs more data points
- Gender and age bias in study population
- Local disease activity monitoring vs. global at low disease activities

Thank you!

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Prof. Dr. Julia Welzel

And all other colleagues



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