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INTRODUCTION

Rosacea, a chronic dermatosis affecting 5% of adults, primarily manifests as **facial redness**. Because of its complex pathophysiology and the variety of symptoms, treatments must be **individualized**, and dermocosmetics might be valuable allies. Efficacy and tolerance of a novel, ecobiological dermocosmetic formulation (DF) including **biomimetic polysaccharides** and **amino-acid derivative** and addressing the pathology immunologic and neurogenic causes, have been evaluated.

MATERIALS & METHODS

In vitro study:

In vitro effects of selected active ingredients were evaluated in cellular models mimicking key mechanisms involved in rosacea.

- **Neurogenic inflammation:** Quantification of **CGRP** & **PACAP** by ELISA in a capsaicin treated co-culture model of human sensory neurons and keratinocytes
- **Innate immunity:** Quantification of **KLK5** by ELISA in an IL-17/Vit D treated normal human keratinocytes model
- **Angiogenesis:** Formation of **pseudo-tubes** by immunostaining and microscopy analysis in VEGF treated co-culture model of human endothelial cells and fibroblasts

Clinical study:

Clinical evaluation of the dermocosmetic formulation (Bioderma, Sensibio AR+ Cream) was conducted on 40 female subjects with mild to moderate vascular rosacea using an **assessor-blind** design and a comparative **double-blind** design.

One group (n=19) followed a **full-face** protocol, applying the DF to the entire face twice daily for 56 days. The second group (n=21) followed a **split-face** randomized protocol, applying the DF to one half of the face and a neutral cream to the other half for the same duration. From day 56 to day 71, all participants used the neutral cream on the entire face. Clinical assessments were performed on D0, D0 T10 min, D28, D56, and D71.

- **Functional and clinical signs:** **Discomfort**, Warmth, Burning, **Flush** (self-grading questionnaire), **IGA** (4-point scale), **Erythema**, **Telangiectasia** (11-point scale)
- **Impact on quality of life:** **RosaQoL** (self-assessment)

RESULTS

INHIBITS NEUROGENIC INFLAMMATION

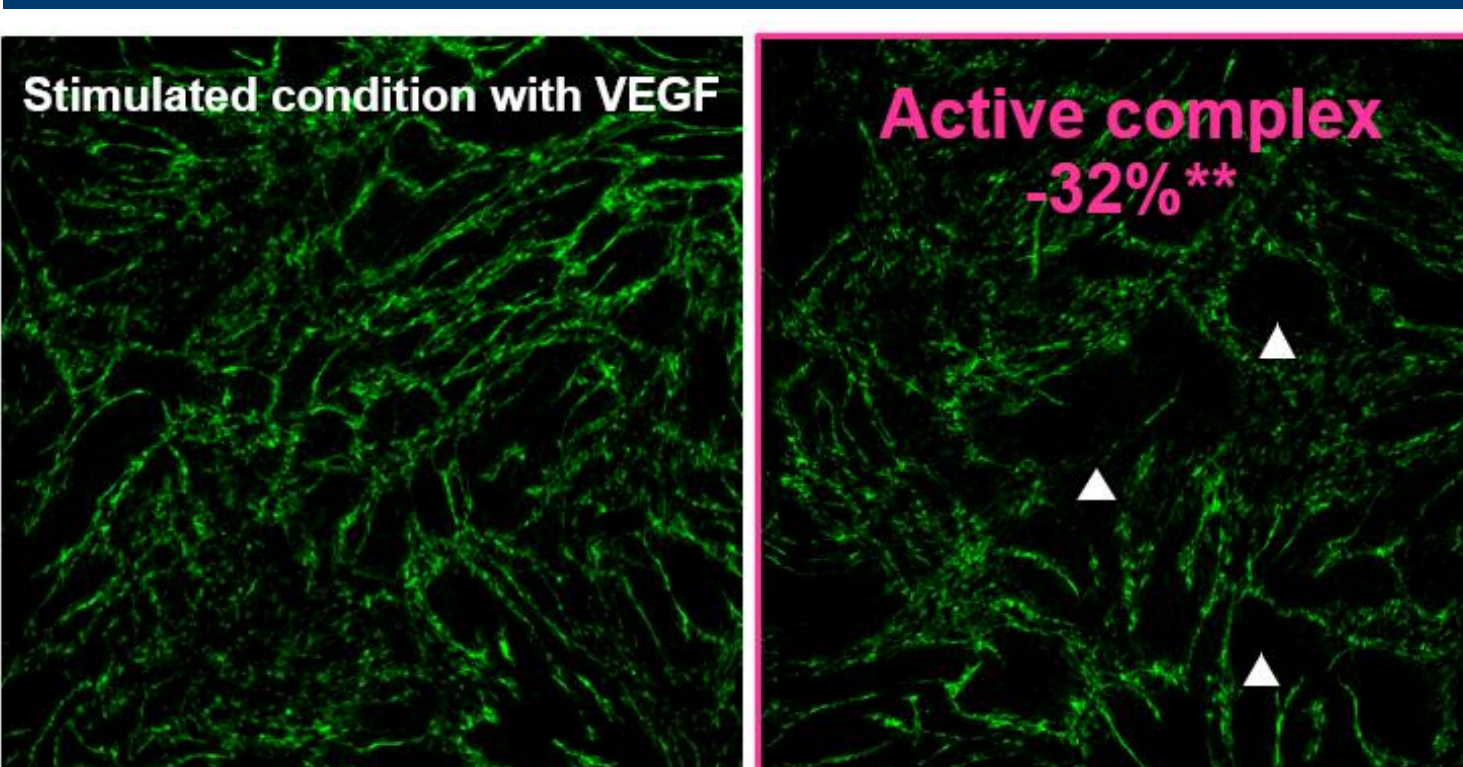
Neuro-soothing ingredient (creatinine) contained in an Active complex significantly prevents the release of CGRP by **-96%**** and PACAP by **-106%****.

➤ **Patented* active complex** (creatinine + maltooligosylglucoside) acts as the root of biological pathways involved in **inflammation**, **innate immunity** and **angiogenesis** responsible for the appearance of redness, small vessels and discomfort sensations in rosacea.

INHIBITS INNATE IMMUNITY

Biomimetic soothing polysaccharides (maltooligosylglucoside) contained in an Active complex significantly reduces KLK5 synthesis by **-84%****.

INHIBITS ANGIOGENESIS



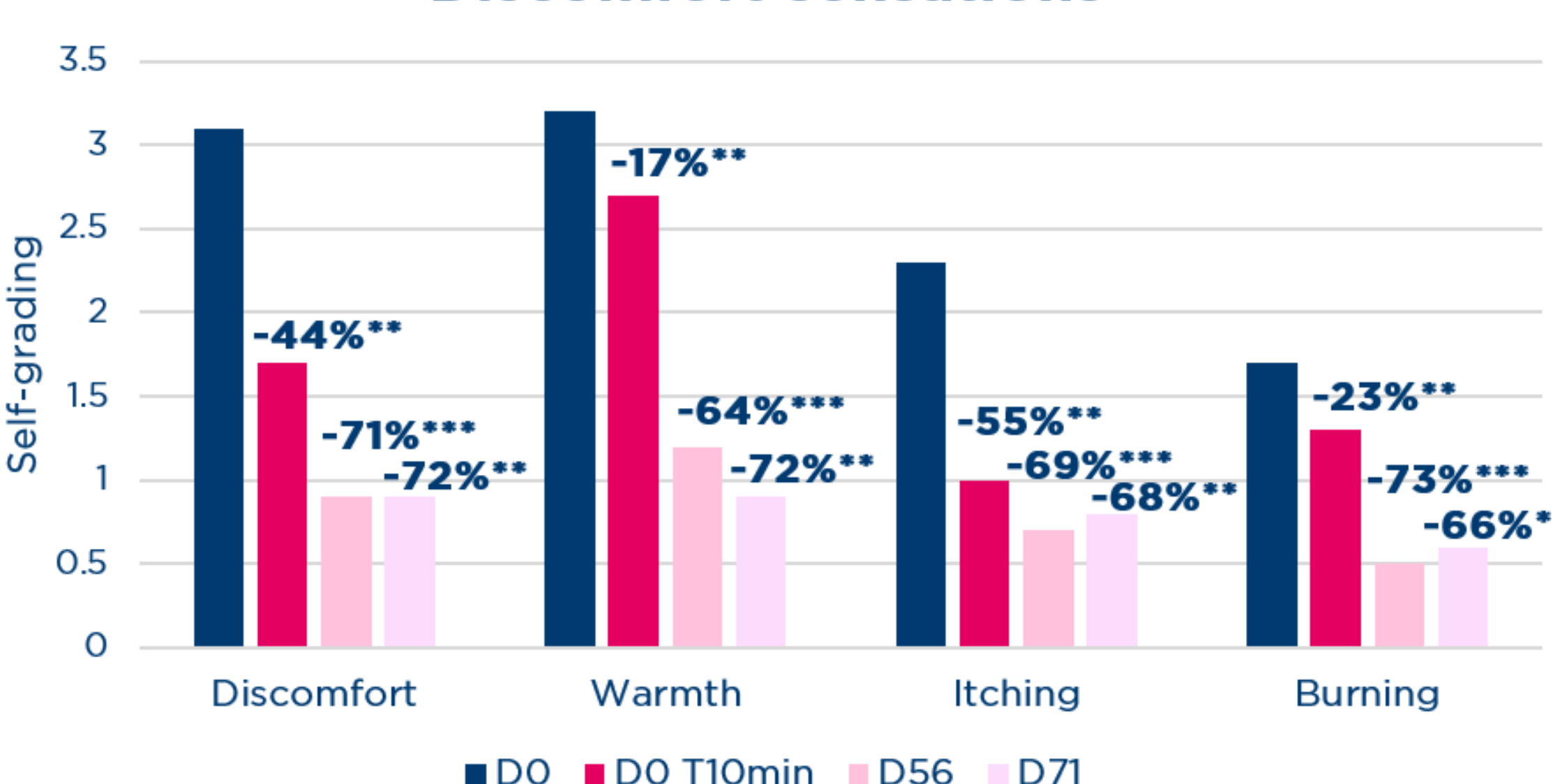
Patented active complex significantly reduces pseudotubes formation by 32%

In green, immunostaining of tube mimicking angiogenesis. White arrows demonstrate absence of staining showing reduction of tube formation.

*Pending patent application
 *p<0.05, **p<0.01, ***p<0.001 Student T-Test vs D0
 Positive control were carried out in order to confirm the validity of the in vitro assay.

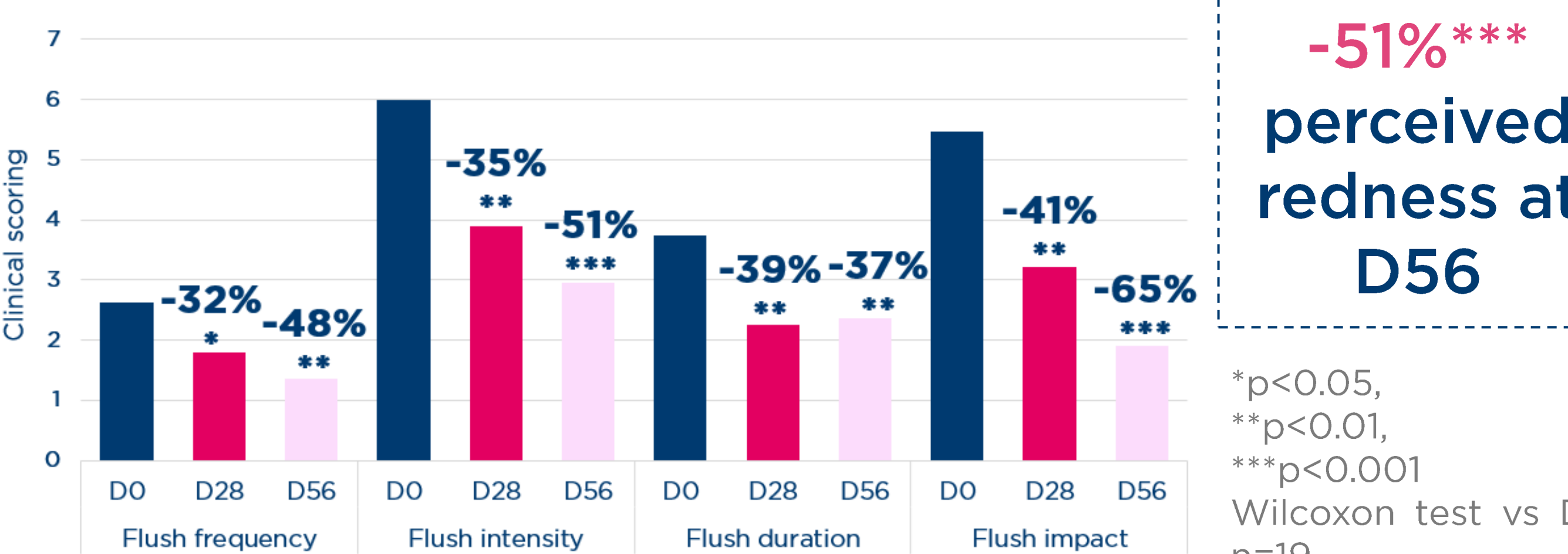
REDUCES FUNCTIONAL AND CLINICAL SIGNS

Discomfort sensations



-71% of discomfort sensations at D56**
Statistical remaining effect 2 weeks after interrupting the use of DF

Flush

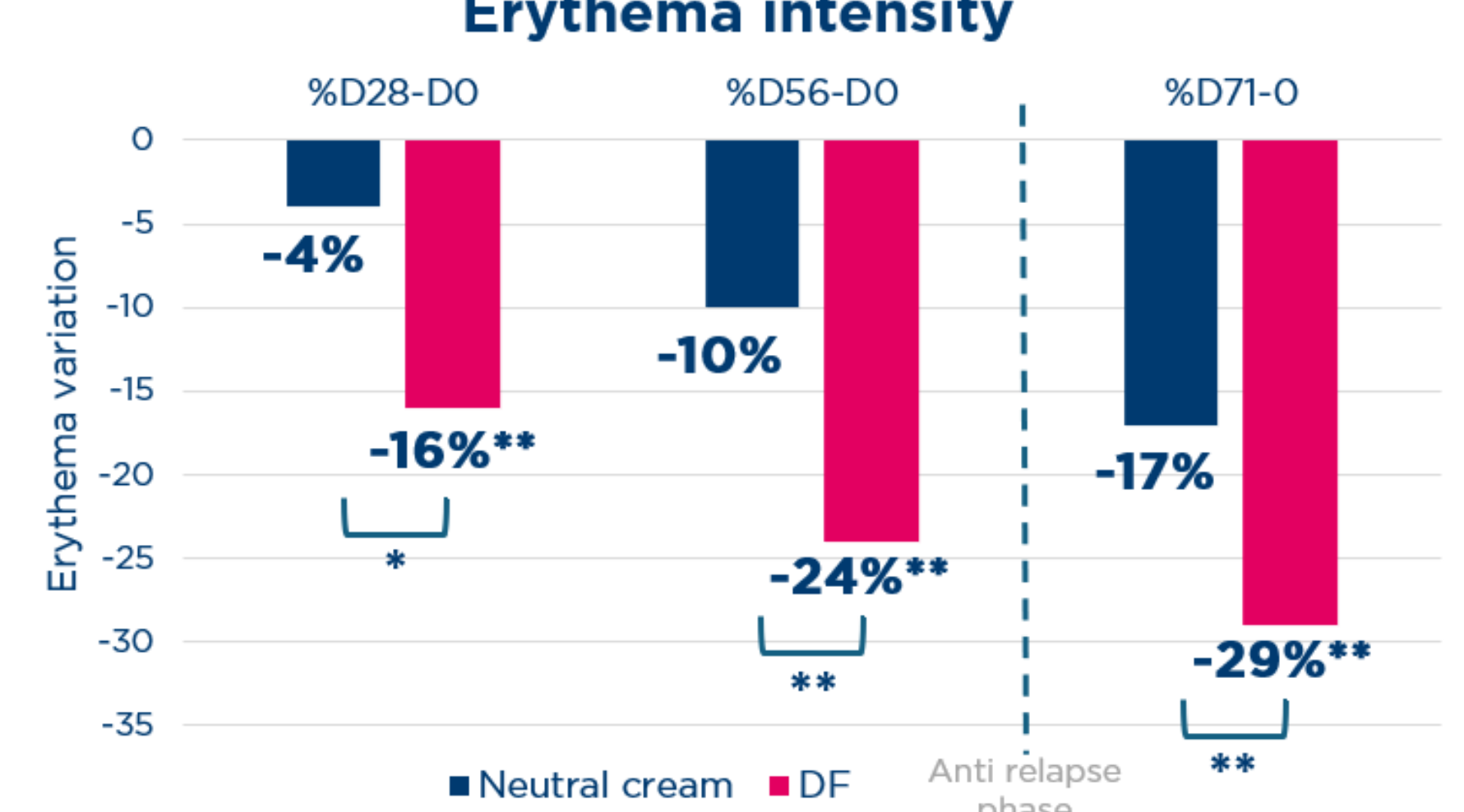


-51% perceived redness at D56**

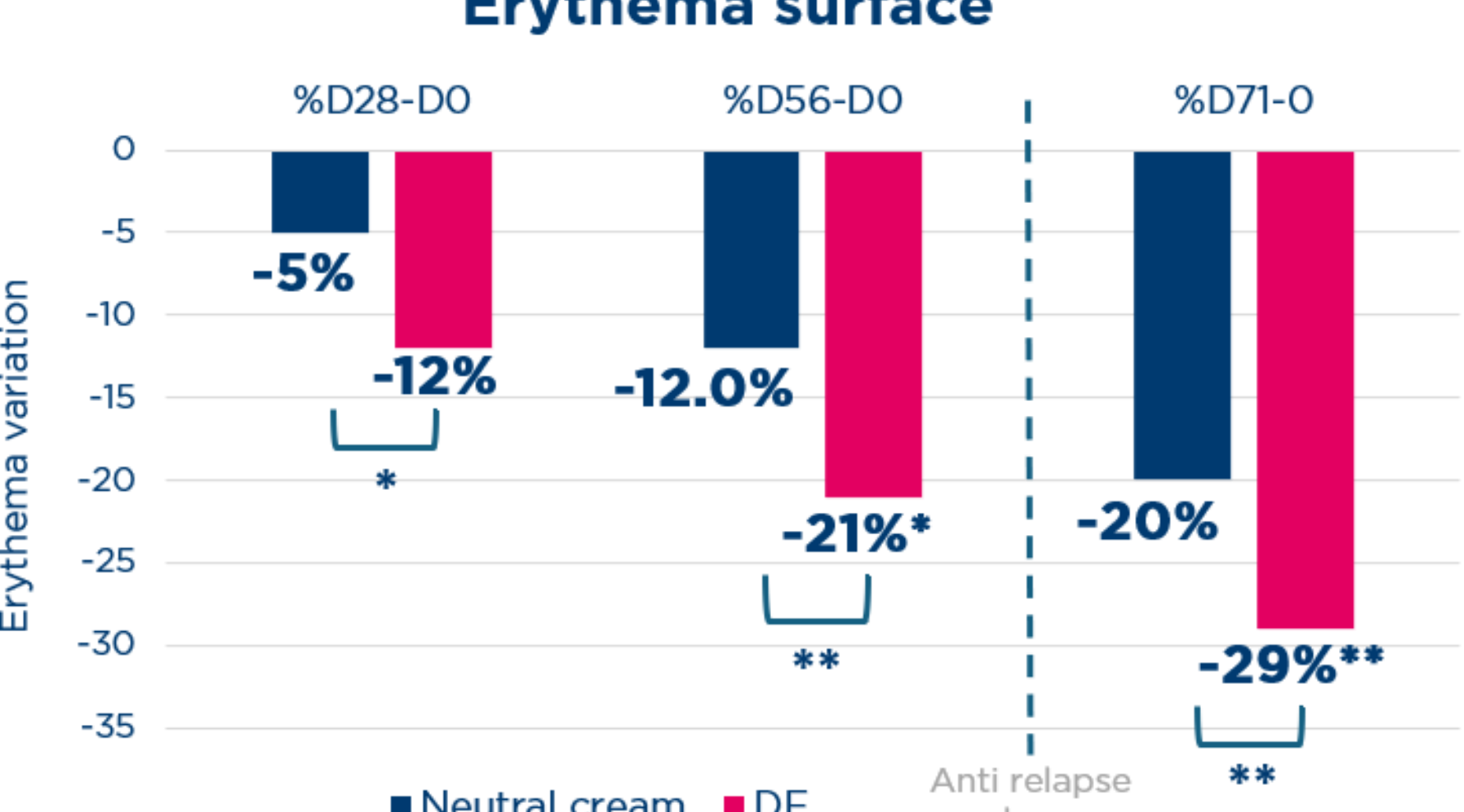
➤ At D71, **74%** of subjects reported they did not experience **any flush** during these 2 weeks of interrupting application of DF.

*p<0.05, **p<0.01, ***p<0.001 Wilcoxon test vs D0, n=40

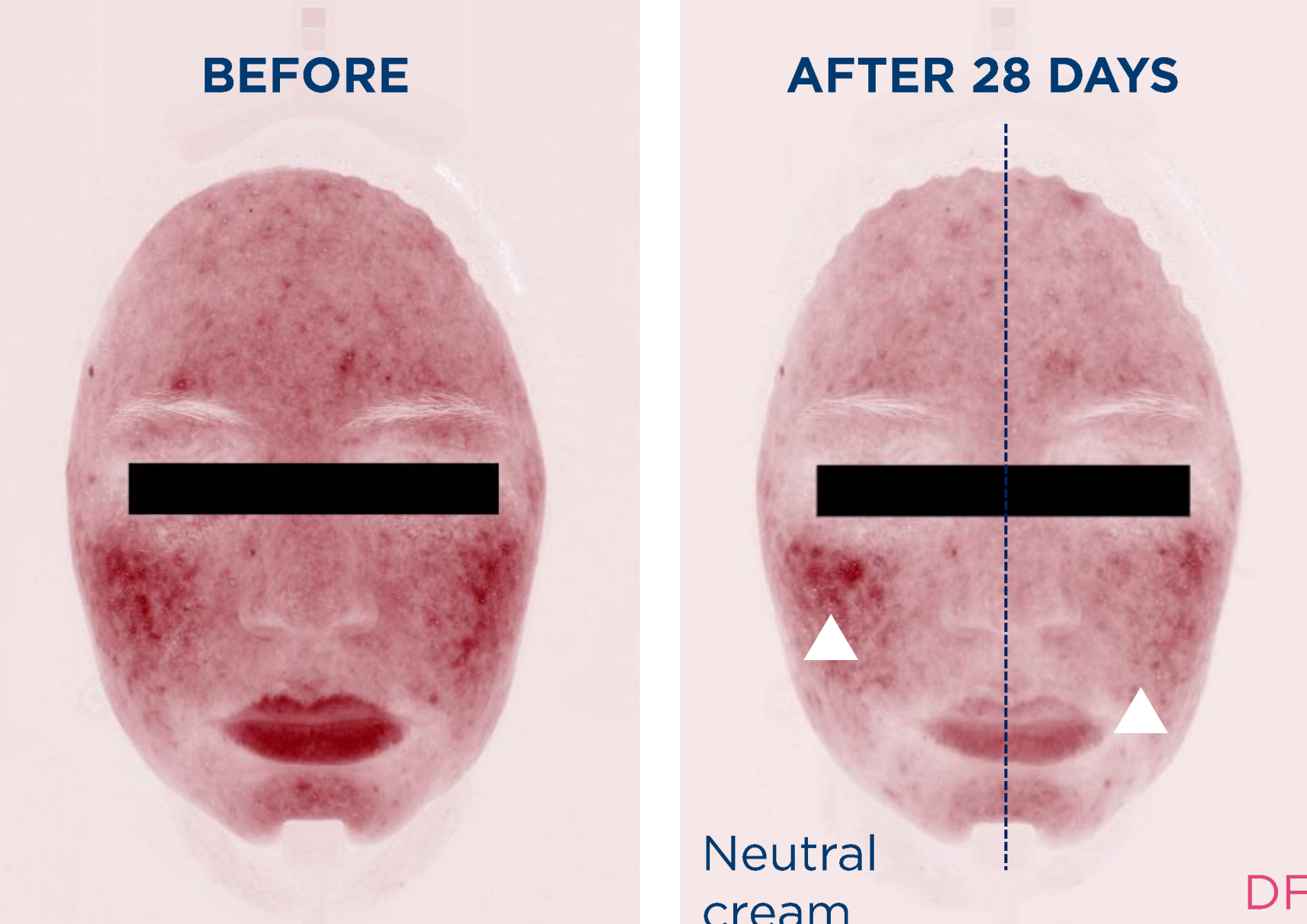
Erythema intensity



Erythema surface



Erythema intensity/surface : -24%/-21%* by D56**
Telangiectasias: -24%* by D56
Statistical remaining effect 2 weeks after interrupting the use of DF



Globally, DF **improves erythema and telangiectasias** more efficiently than the neutral cream, making it a valuable ally in **rosacea management**.

Improved IGA: -27% at D56**
Statistical remaining effect 2 weeks after interrupting use of DF

*p<0.05, **p<0.01, ***p<0.001 Wilcoxon test vs D0 or neutral cream, n=21

IMPACT ON QUALITY OF LIFE

RosaQoL:

- « I worry that my rosacea may get worse » decreased by **-28%**** in a statistically significant manner after 28 days of product application
- « My skin flushes » decreased by **-18%**** in a statistically significant manner after 56 days of product application

Quality of life improved : +11% at D56

CONCLUSION

By targeting innate immunity and neurogenic inflammation through its **active complex**, this dermocosmetic cream significantly alleviates the **clinical** and **functional** signs of rosacea more effectively than a neutral cream. The beneficial effect **persists** on most clinical and functional signs even two weeks after stopping its use. It thus represents an advanced dermocosmetic solution for visibly improving the condition and quality of life of rosacea-prone skin.