# Efficacy and Tolerability of a Ceramide- and NMF-Containing Moisturising Lotion Compared to a Glycerin-Based Lotion in Mature Xerosis

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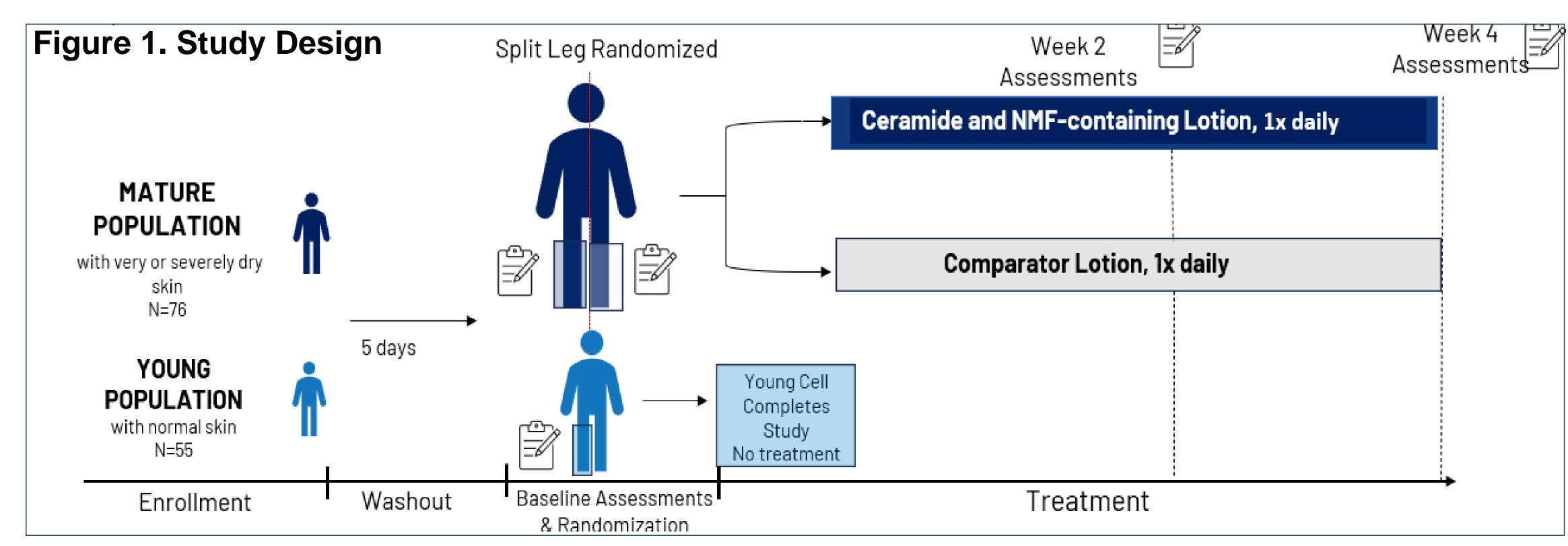
# INTRODUCTION

Xerosis, or dry skin, is highly prevalent in older adults, affecting 85% of patients 65 years and older.1 Mature xerosis often manifests as a severe form of xerosis, due to intrinsic and extrinsic factors contributing to a decrease in stratum corneum lipids, impaired skin barrier function, and reduced natural moisturising factors (NMF) levels, diminishing water binding capacity. These factors also contribute to pruritus, particularly on the extremities, and are exacerbated by low temperature and humidity. This study assessed the efficacy and tolerability of a moisturiser containing three skin-identical ceramides and NMFs in treating mature xerosis, comparing its performance to a glycerin-based comparator lotion. Data from young, healthy patients served as a reference.

## METHODS

#### PATIENT POPULATION

This 4-week split-leg design included 76 adults, aged 55-85, with mature xerosis. This group received both test and comparator products. An additional population of 55 healthy adults, aged 20-35, served as a reference for baseline physiological skin parameters (Trans-epidermal waterloss (TEWL), hydration, ceramides). All Fitzpatrick skin types were represented among the participants. **Assessments included were: (1) Barrier Assessments:** ceramide levels, NMFs, barrier cohesion **(2) Instrumental:** TEWL, hydration, pH **(3) Clinical:** Overall Dryness Score (ODS), specified symptom sum score system Scaling, Roughness, Redness, and Cracks (SRRC) **(4) Tolerance (5) Patient Satisfaction** 



### RESULTS

Figure 2. Baseline Hydration of Mature Population vs. Young Population.

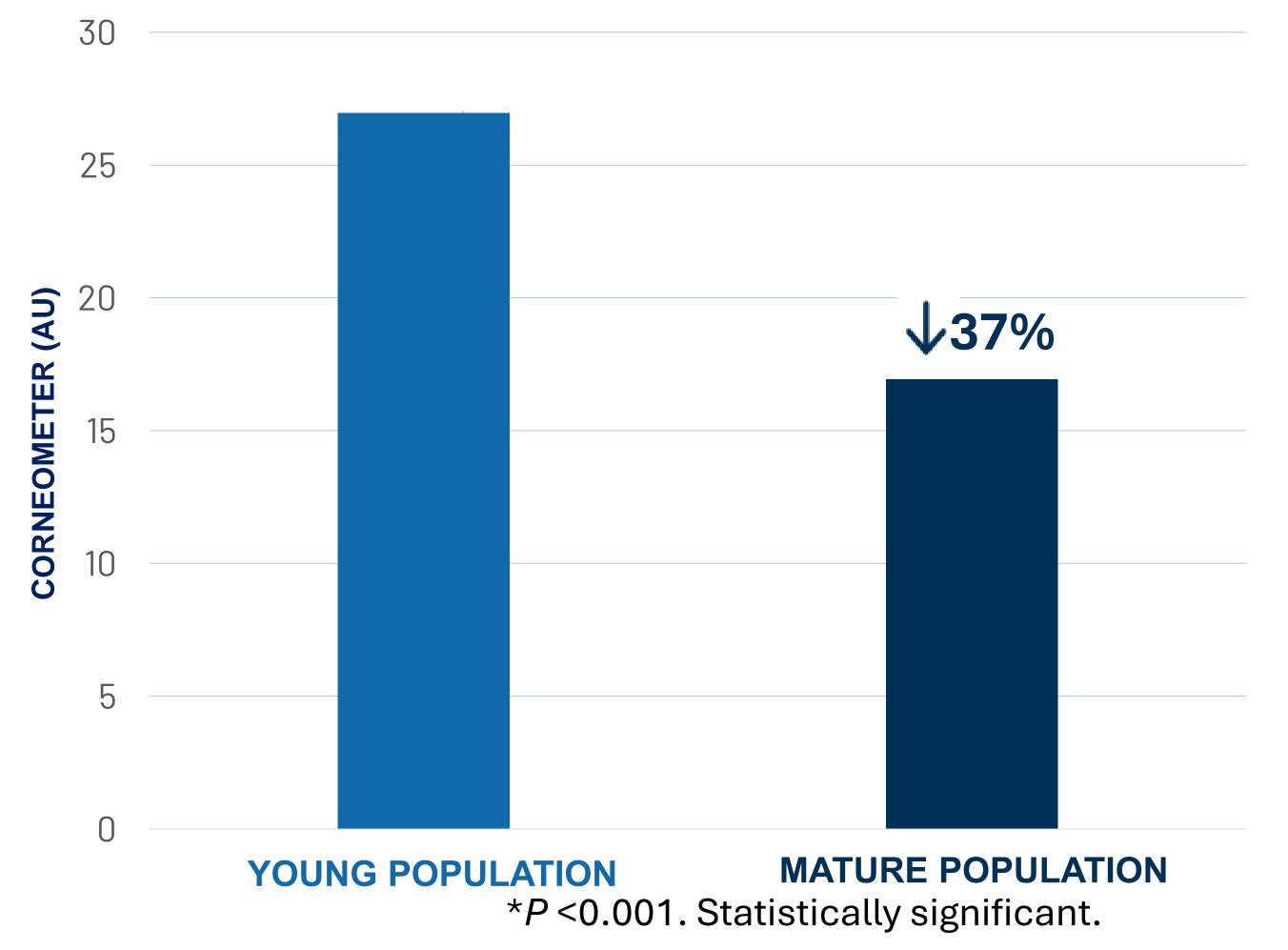
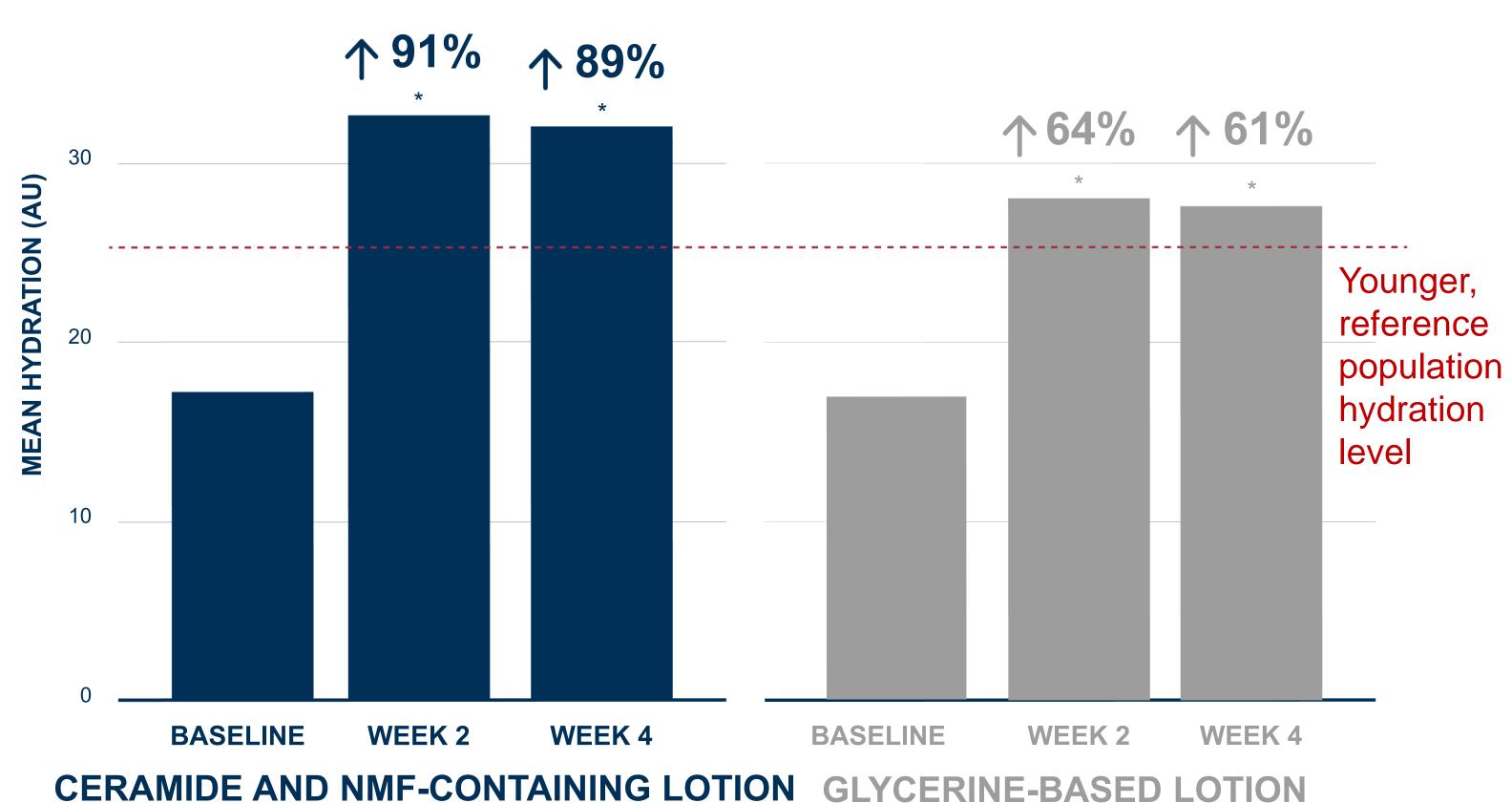
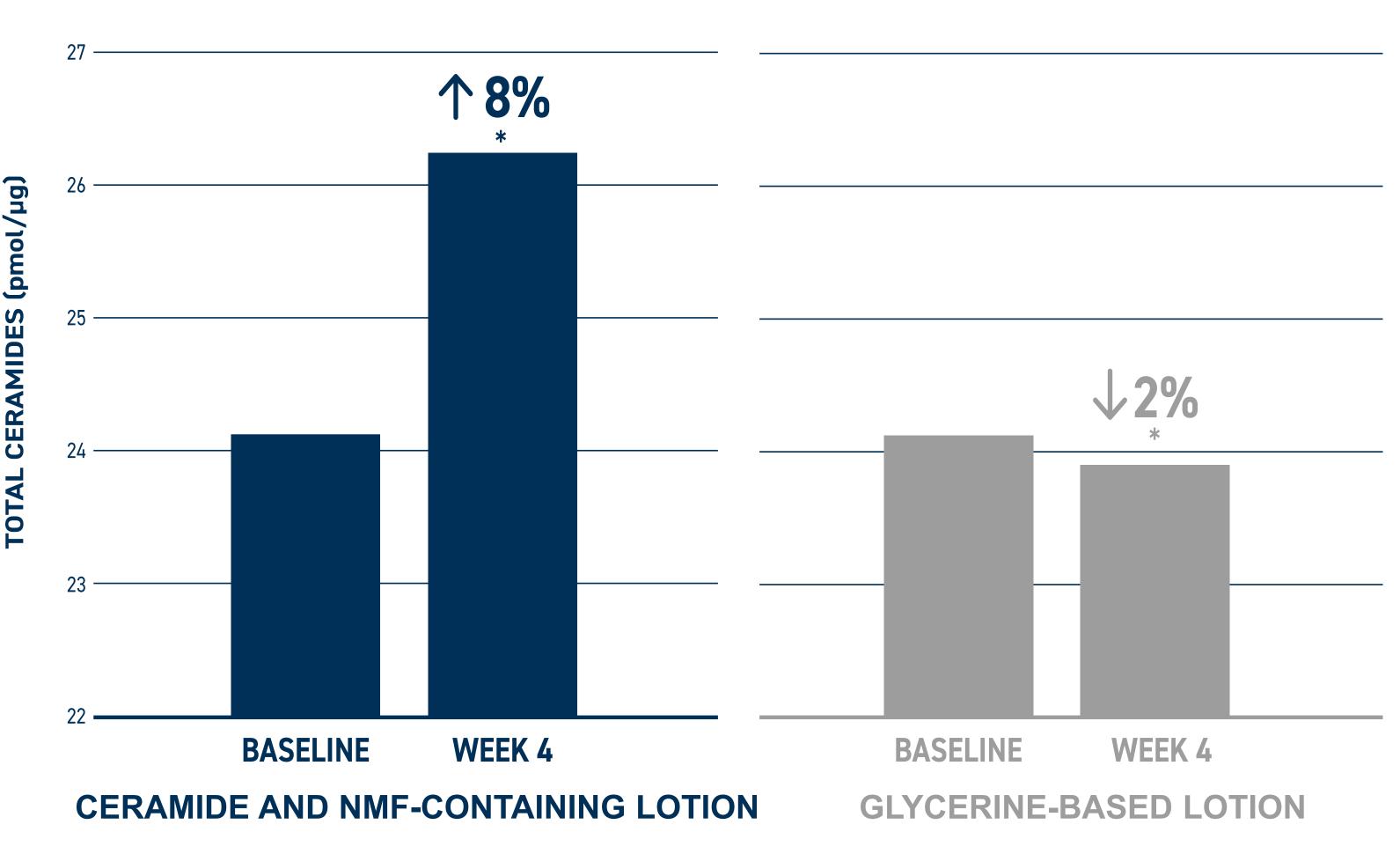


Figure 4. Hydration Over Four Weeks Comparing Site Treated With The Test Lotion And The Control Lotion.



\*P < 0.001. Statistically significant.

Figure 3. Total Ceramides Collected Via Tape Strip At Baseline And Week 4 For Site Treated With Test Lotion And Control Lotion.



\* $P \le 0.05$ . Statistically significant compared with baseline.

- At week 4 ceramide and NMF-containing lotion:
- Significantly reduced ODS by 72.5% (p<0.001 vs. baseline), while the comparator reduced ODS by 62.2% (p<0.001 vs. baseline). The difference between the test product and comparator in ODS reduction was statistically significant (p=0.001)
- **Significantly reduced SRRC** by 68.8% (p<0.001), demonstrating superior efficacy compared to the comparator's 59.8% reduction (p<0.001 vs baseline). This difference in SRRC reduction between the test product and comparator was significant (p<0.05).
- Well tolerated, with no subject-perceived itch or tingling

# CONCLUSION

The ceramide- and NMF-containing moisturiser provided significant clinical and subjective improvement in mature xerosis, restored hydration and maintained skin barrier function over 4 weeks compared to a glycerin-based comparator.

# REFERENCES