

Itch Reduction and Quality of Life Improvement in AD for First Human Use of Zabalafin

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Learning Objectives:

1. Understanding the role of bacteria, *S Aureus* in particular, in Atopic Dermatitis (AD)
2. Provide interim Phase 2a clinical trial results for the new drug Zabalafin Hydrogel to facilitate understanding of how it might be beneficial as a highly tolerable, complete therapeutic for all AD problems, including AD's bacterial problem

Takeaway Message:

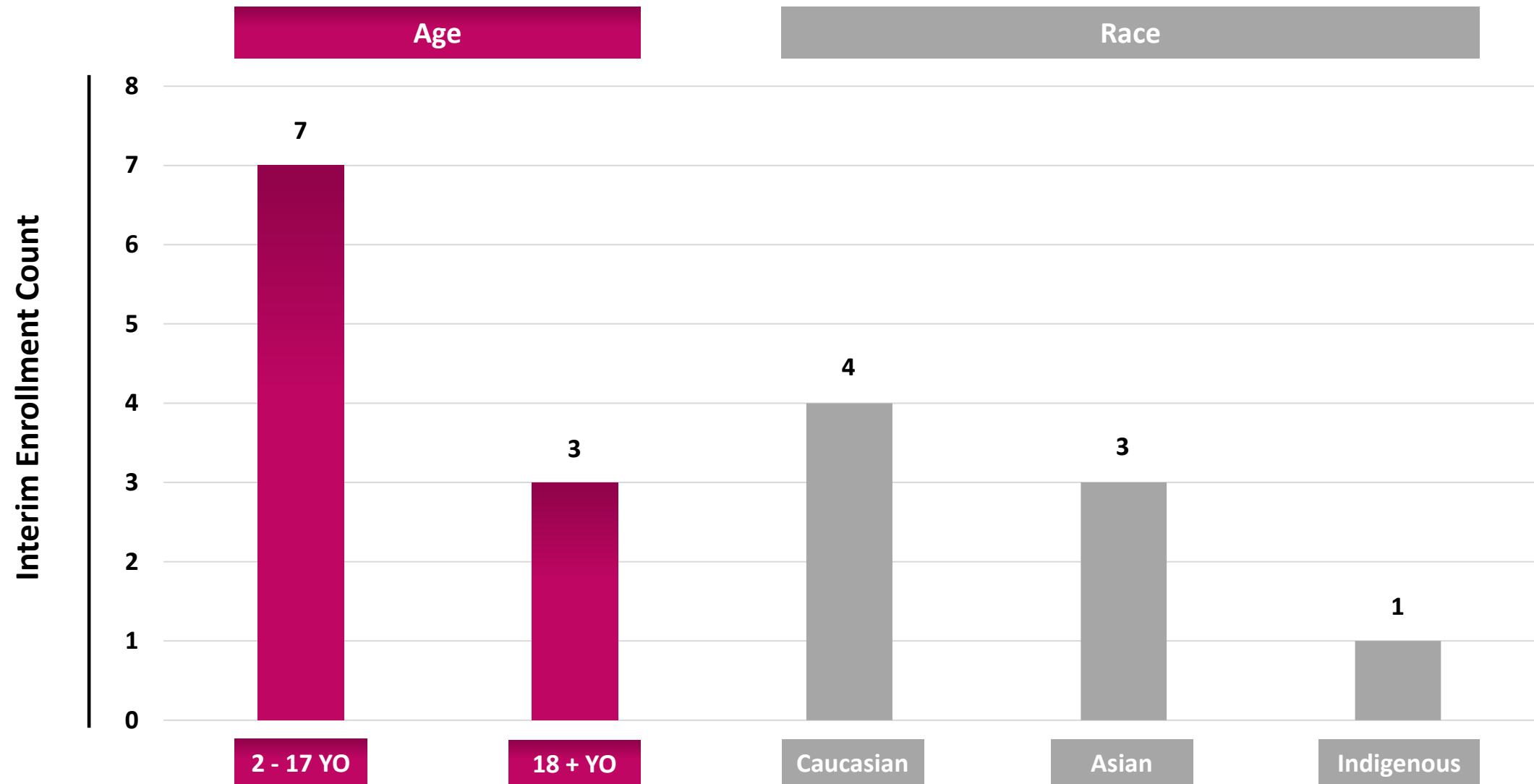
1. Bacteria, *S Aureus* in particular, play a major and important causal role of AD
2. The new drug Zabalafin Hydrogel offers a promising anti-pruritic, anti-inflammatory and anti-bacterial drug with a strong patient tolerability profile for worry-free long-term and continuous use to treat *S. aureus*-driven and immuno-inflammatory driven AD

Conflict of Interest: This research was funded by Alphyn Biologics, Inc.

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Enrollment Population

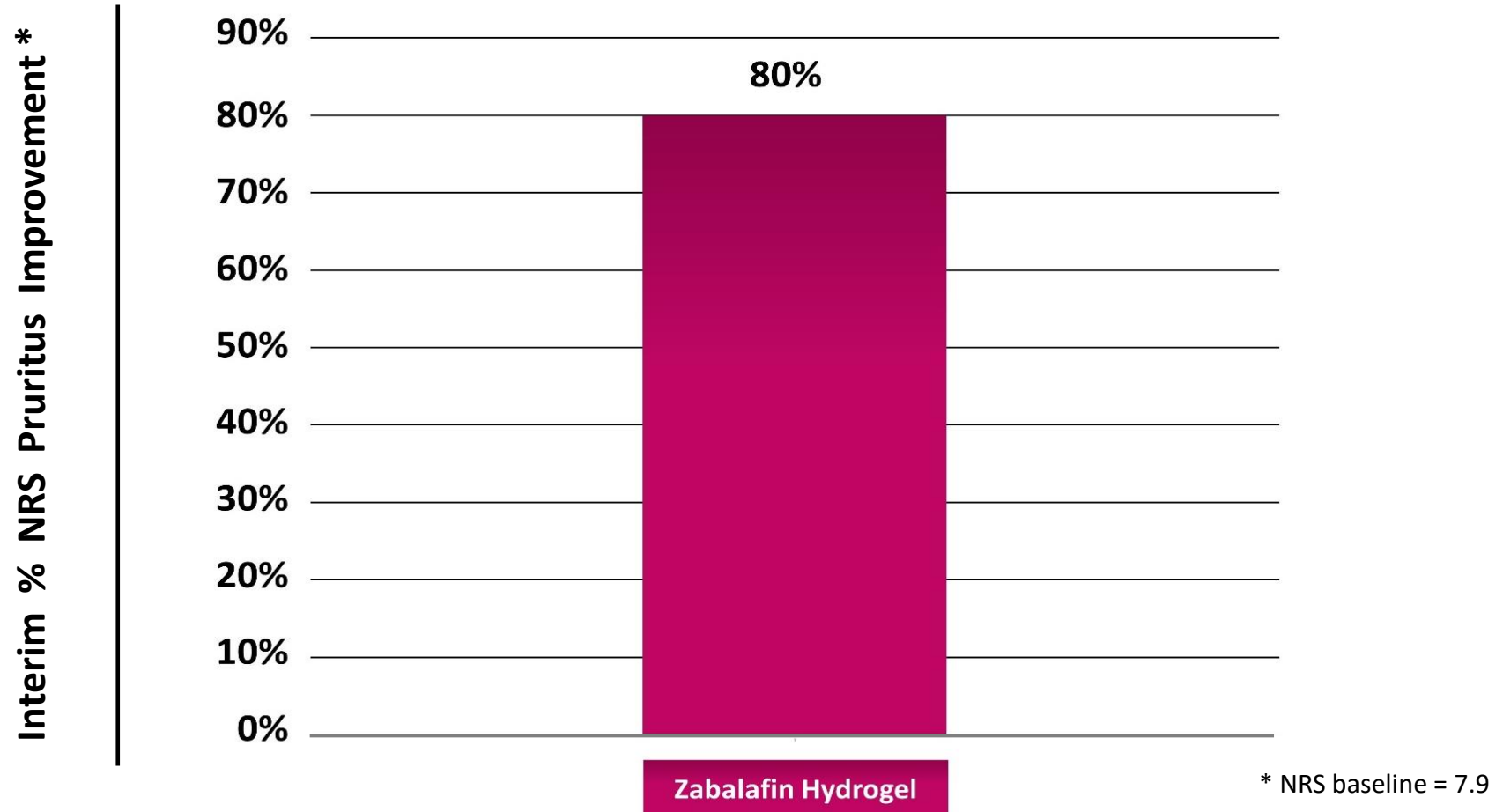
Interim Results
at 8 weeks for 10 participants



80% Achieved NRS Improvement of ≥ 4 at 8 Weeks

Interim Results
at 8 weeks for 10 participants

Primary reason AD sufferers visit the doctor

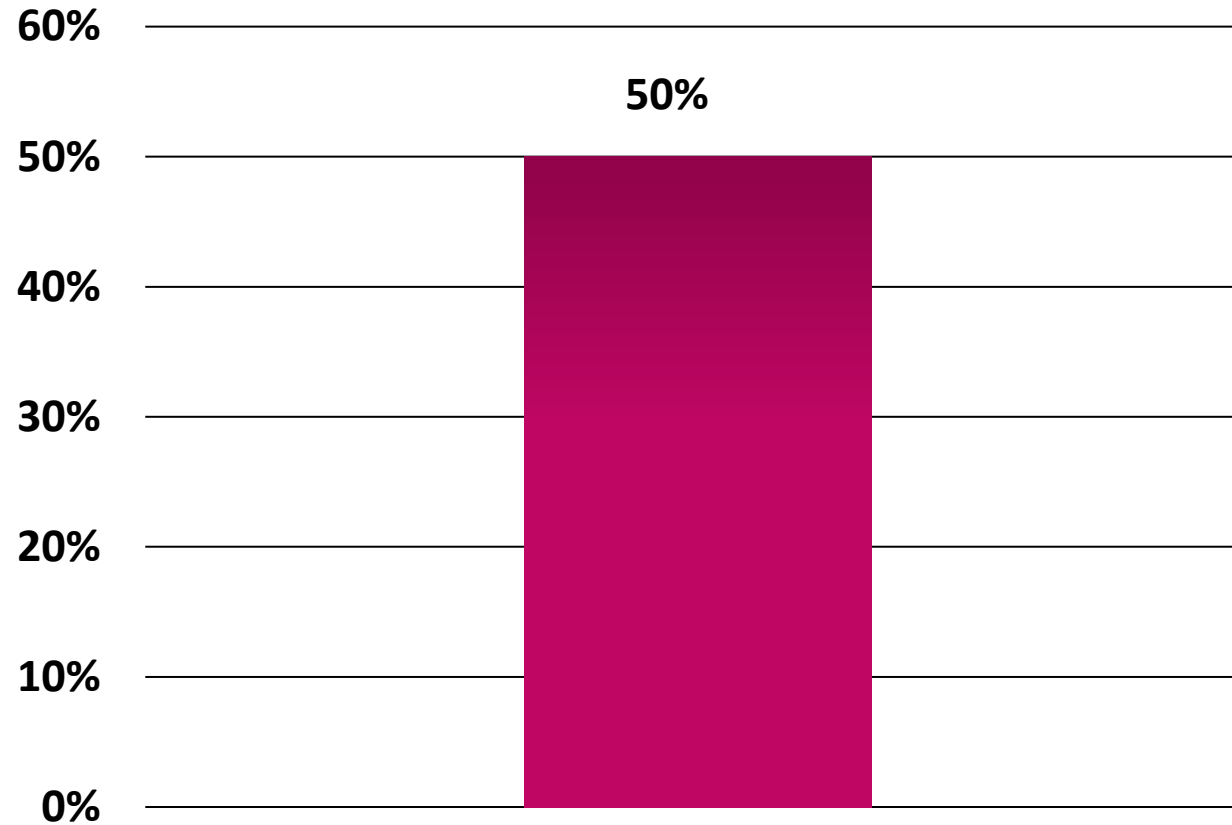


50% Achieved Itch Improvement at 1st Visit on Day 4

Interim Results
at Day 4 FOR 10 participants

Primary reason AD sufferers visit the doctor

Interim % NRS Pruritus Improvement
at 1st Visit Day 4 *

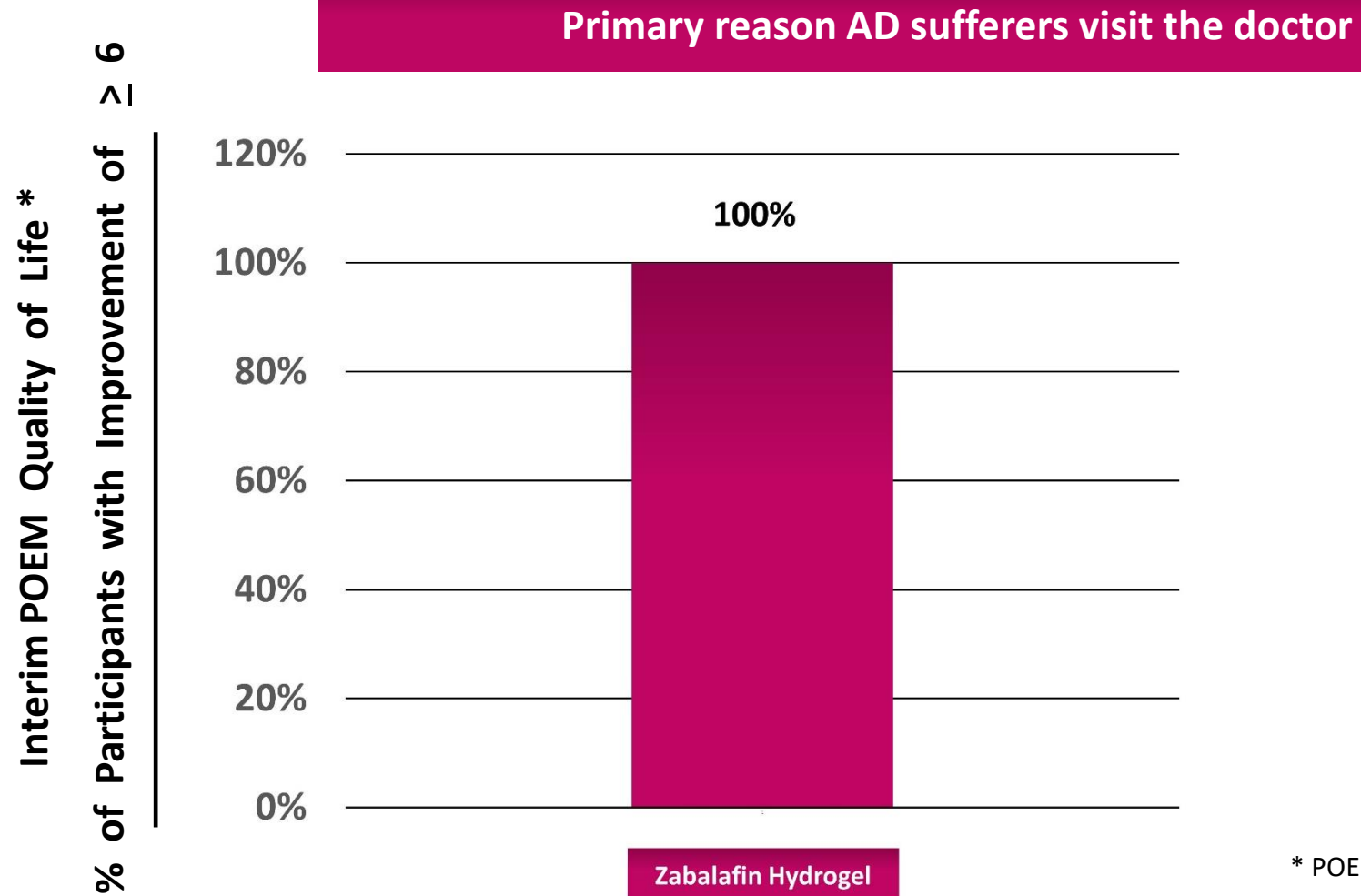


Zabalafin Hydrogel

* NRS baseline = 7.9

Strong Improvement in Quality of Life

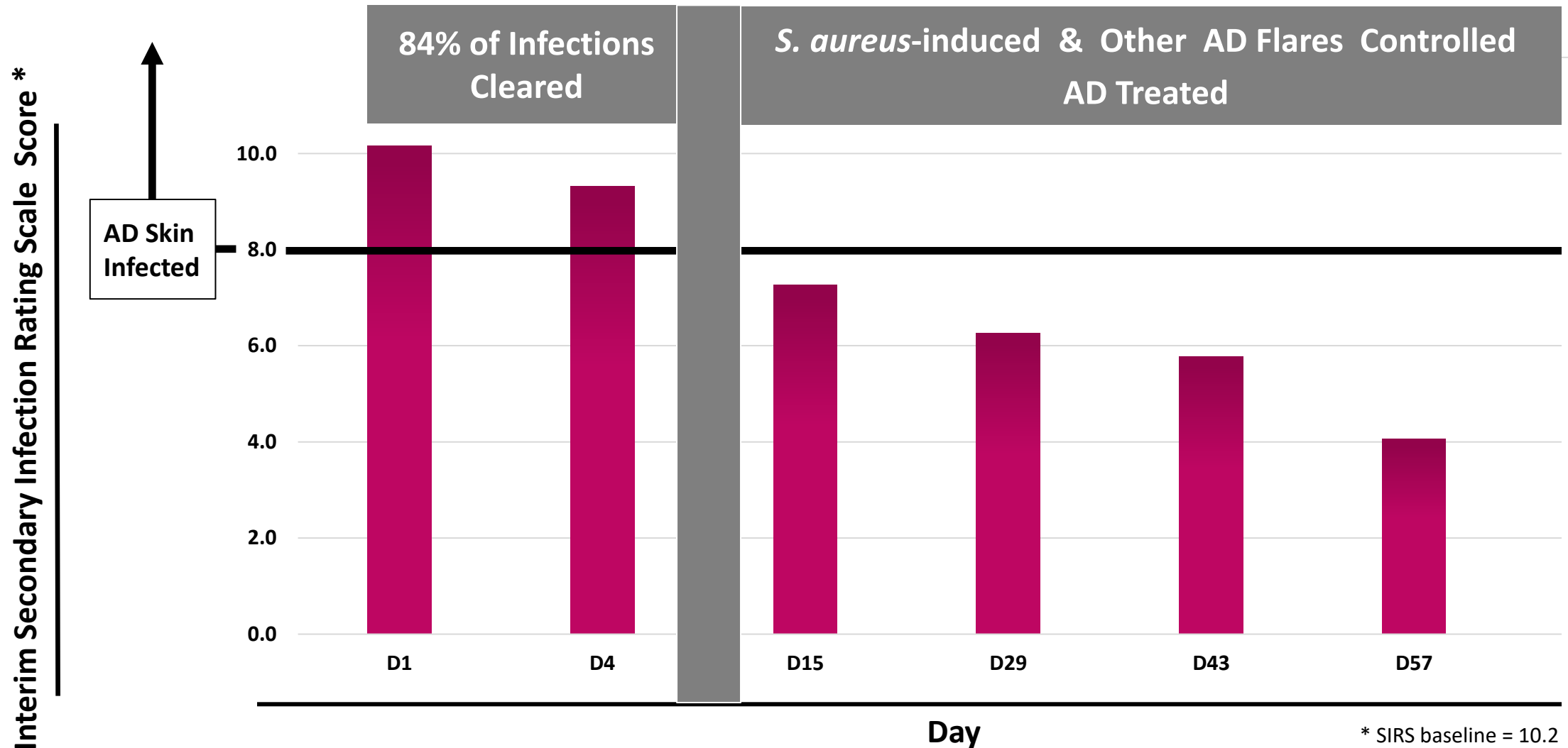
Interim Results
at 8 weeks for 10 participants



* POEM baseline = 18.3

Directly Treated AD's *S. aureus* Component

Interim Results
at 8 weeks for 10 participants



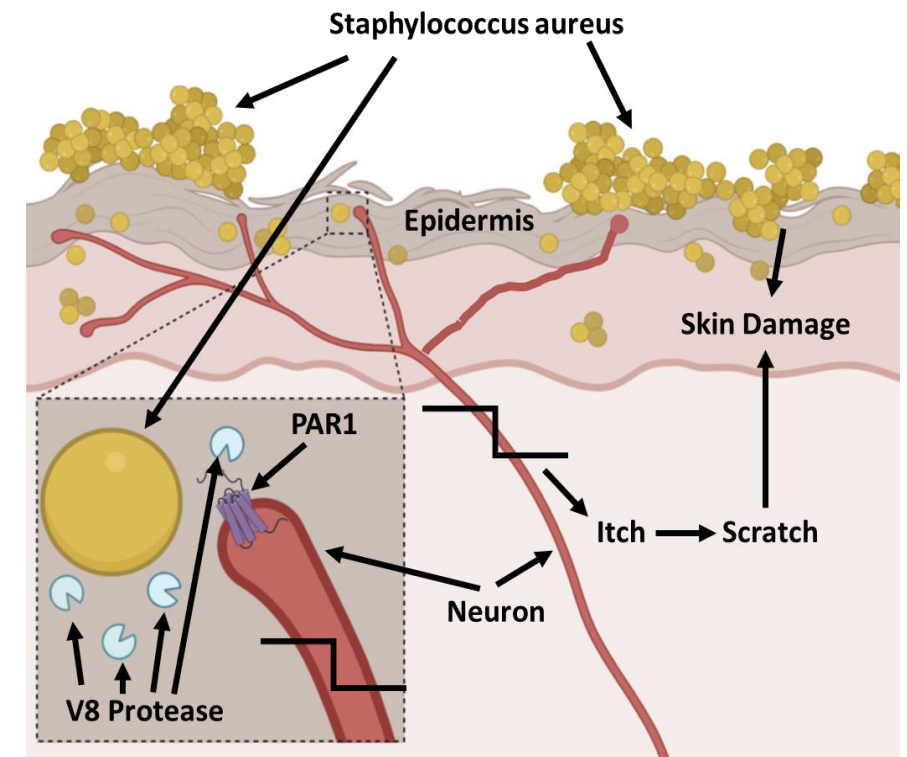
S. aureus drives itch and scratch-induced skin damage through a V8 protease-PAR1 axis

Liwen Deng,¹ Flavia Costa,^{2,10} Kimbria J. Blake,^{1,10} et al Isaac M. Chiu,^{1,11,*}

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- [*S. aureus*] ... directly activates ... neurons to drive itch”
- “*S. aureus* ... V8 protease critical mediator evoking spontaneous itch and alopecia”
- “ ... [*S. aureus*] V8 protease was specifically necessary for bacteria-mediated itch”
- “In addition to V8, *S. aureus* Hla activated DRG neurons and induced itch ... ”

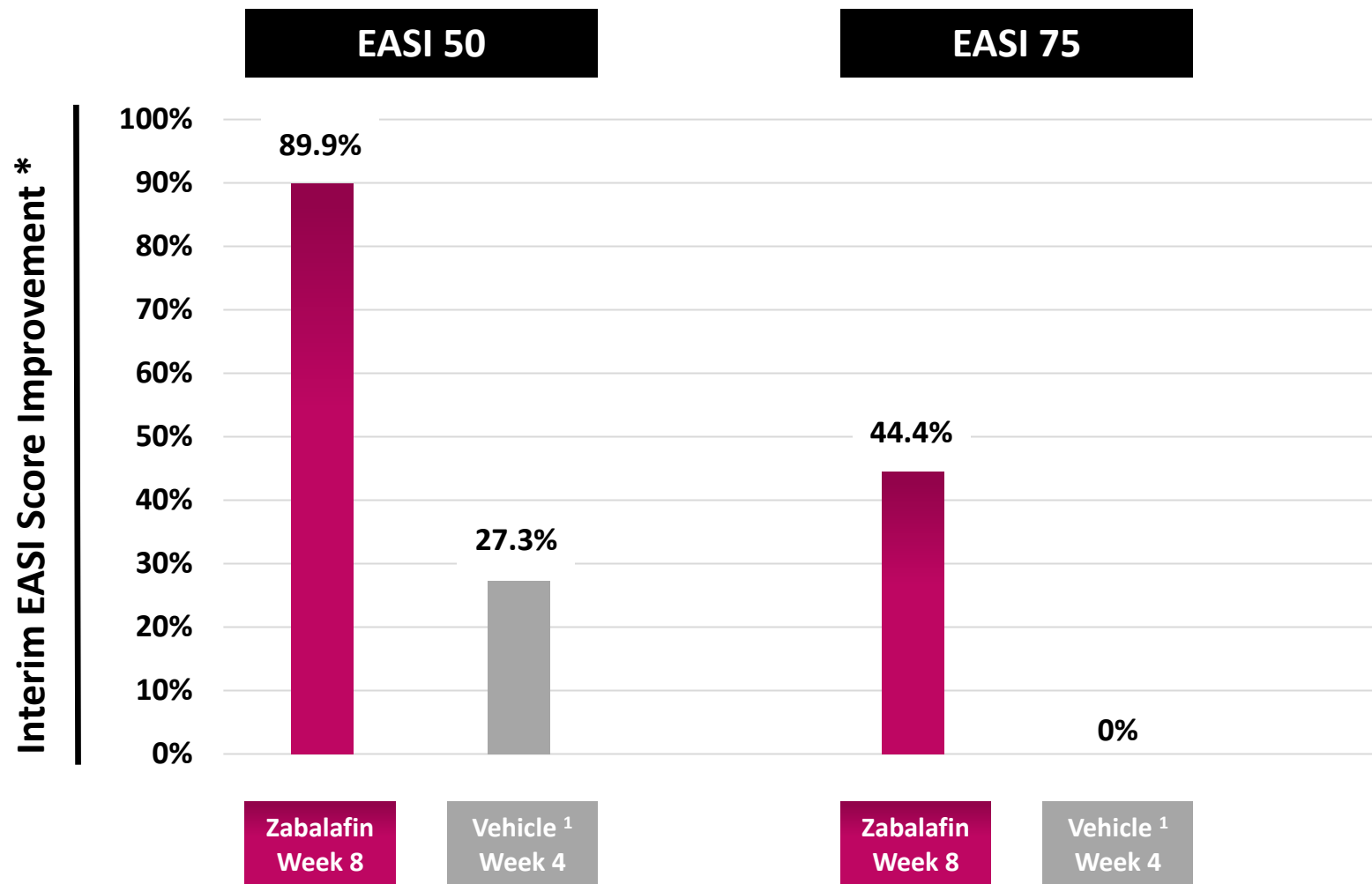
Zabalafin Hydrogel has mechanisms of action targeting sensory afferent neurons



[*S. aureus*'s] V8 protease cleaves proteinase-activated receptor 1 (PAR1) on mouse and human sensory neurons

EASI - Strong Improvement in Inflammation

Interim Results
at 8 weeks for 8 participants

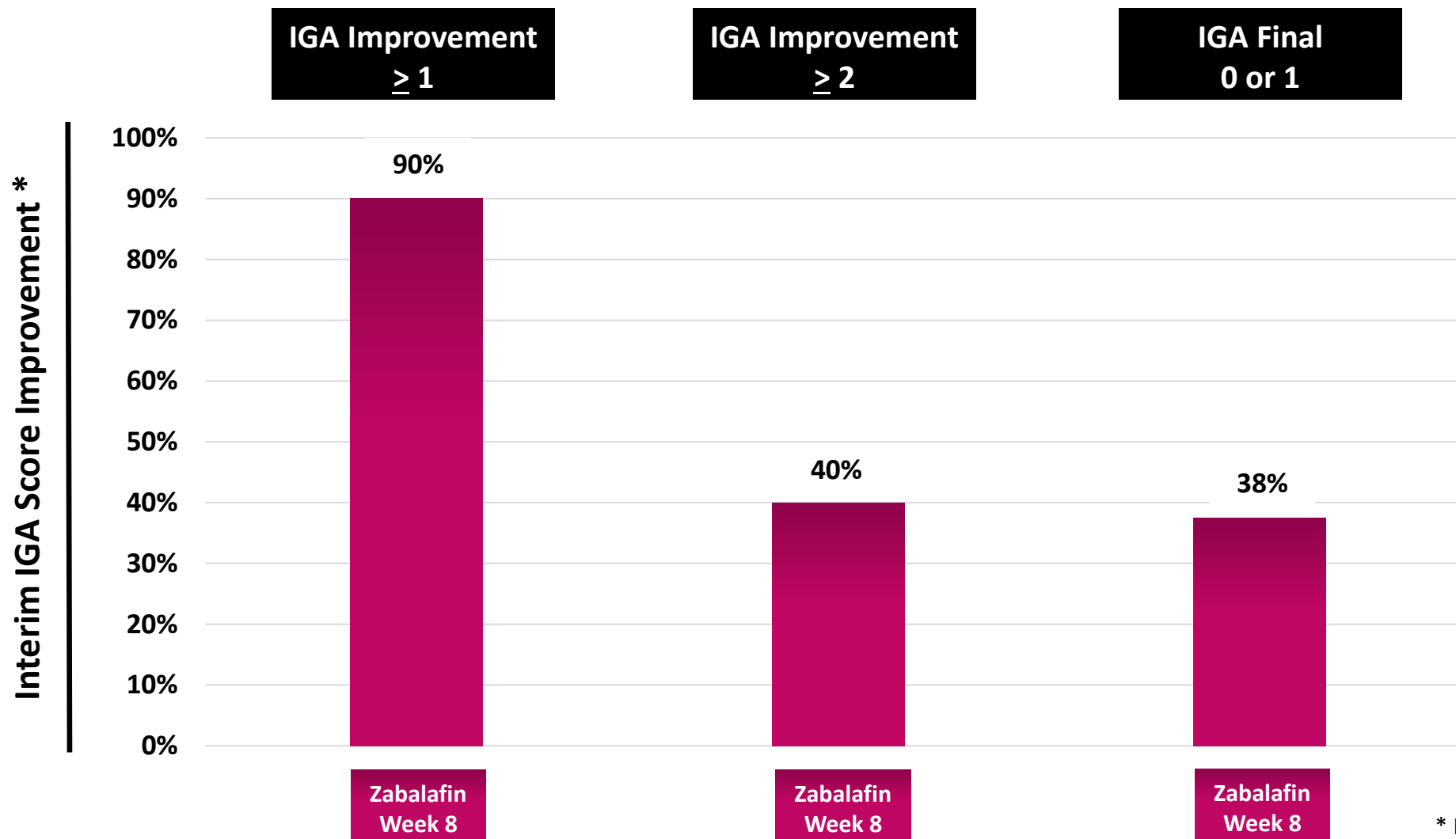


¹ Vehicle results from Zabalafin Hydrogel 4 week trial

* EASI baseline = 9.4

IGA - Strong Improvement in Inflammation

Interim Results
at 8 weeks for 8 participants



* IGA baseline = 2.9

A Consensus on *Staphylococcus Aureus* Exacerbated Atopic Dermatitis and the Need for a Novel Treatment

Lawrence A. Schachner MD FAAD FAAP,^a Anneke Andriessen PhD,^b
Mercedes E. Gonzalez MD FAAD,^c Karan Lal DO MS FAAD,^d Adelaide A. Hebert MD FAAD,^e
Lawrence F. Eichenfield MD FAAD FAAP,^f Peter Lio MD FAAD^g

- “*S. aureus* [bacteria] almost universally colonizes the skin of AD patients, contributing to AD infections and the development of flares and exacerbations”
- “... managing *S. aureus*-driven AD [must be done] and remains problematic”
- “The botanical drug Zabalafin Hydrogel ... offers a promising alternative to anti-inflammatory and antibiotic drugs in treating ... AD ...”
- “The Phase 2a study of Zabalafin Hydrogel in AD patients assessing skin infection (rating pruritus, inflammation, blistering, exudate, and crusting) showed a correlation with ... other AD measurement scales (Investigator's Global Assessment [IGA], Eczema Area and Severity Index [EASI])”
- “Zabalafin Hydrogel represents a first-in-class multi-target therapeutic topical drug with multiple mechanisms of action, including anti-pruritic, antibacterial, and anti-inflammatory activity.”
- “Zabalafin Hydrogel addresses the unmet need for a single topical AD therapy suitable for patients with pruritus and secondary bacterial infection without systemic side effects.”