A phase 2 study investigating the effect of EDP1815

An orally-delivered, anti-inflammatory, gut-restricted commensal microbe in the treatment of mild and moderate plaque psoriasis

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March 2022

DISCLOSURE OF RELATIONSHIPS WITH INDUSTRY

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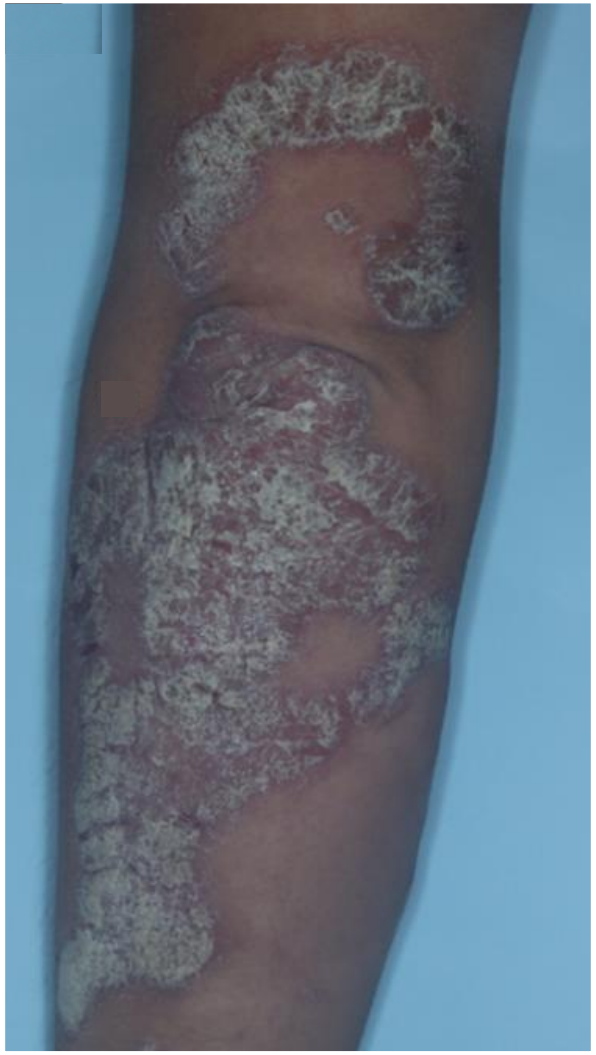
S026 Late-Breaking Research: Clinical Trials

DISCLOSURES

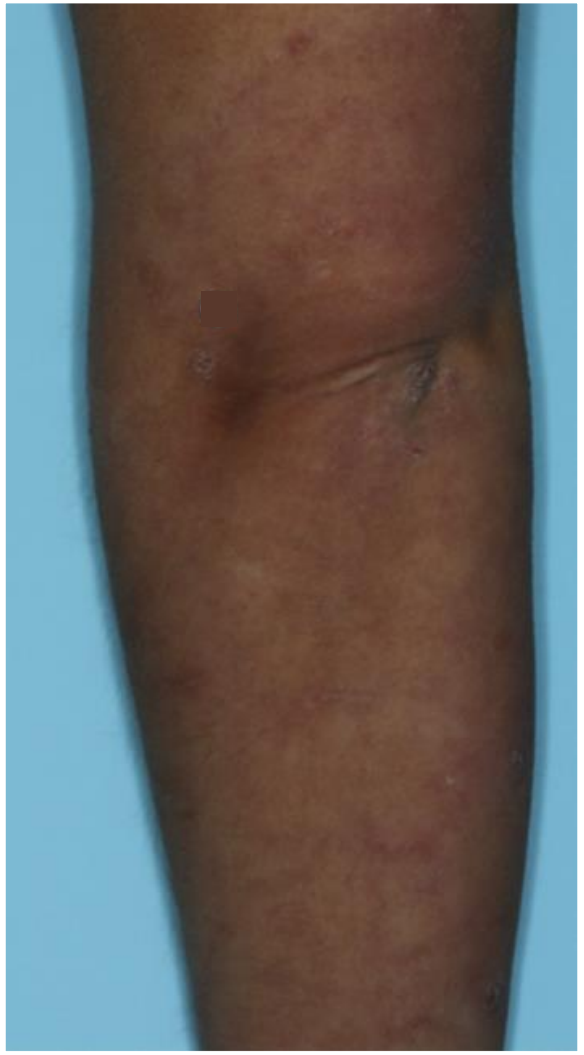
Evelo Biosciences: Employee – Compensation

The potential of EDP1815

Baseline



Week 16



Patient with moderate psoriasis enrolled in Phase 2 trial who achieved PASI-50 response at week 16 on EDP1815 – skin lesions improved further at follow-up

Section 1. EDP1815: Background

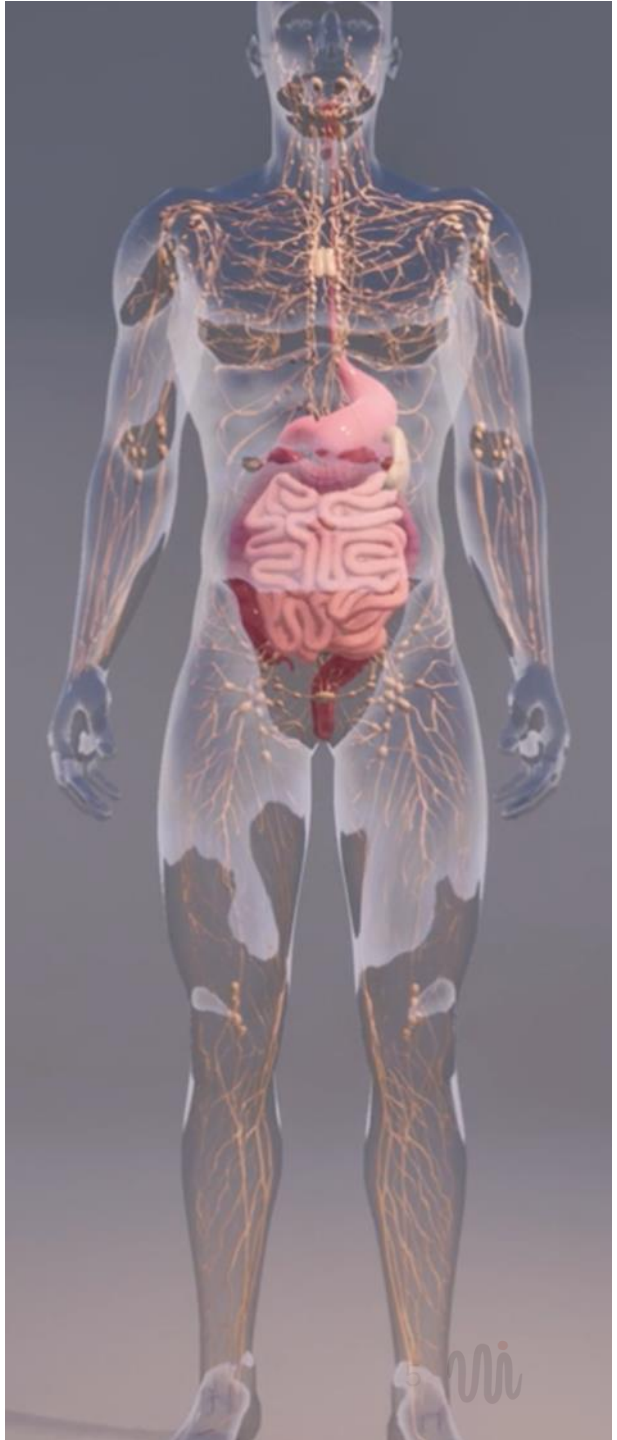
Section 2. Phase 2 Study Design

Section 3. Phase 2 Results

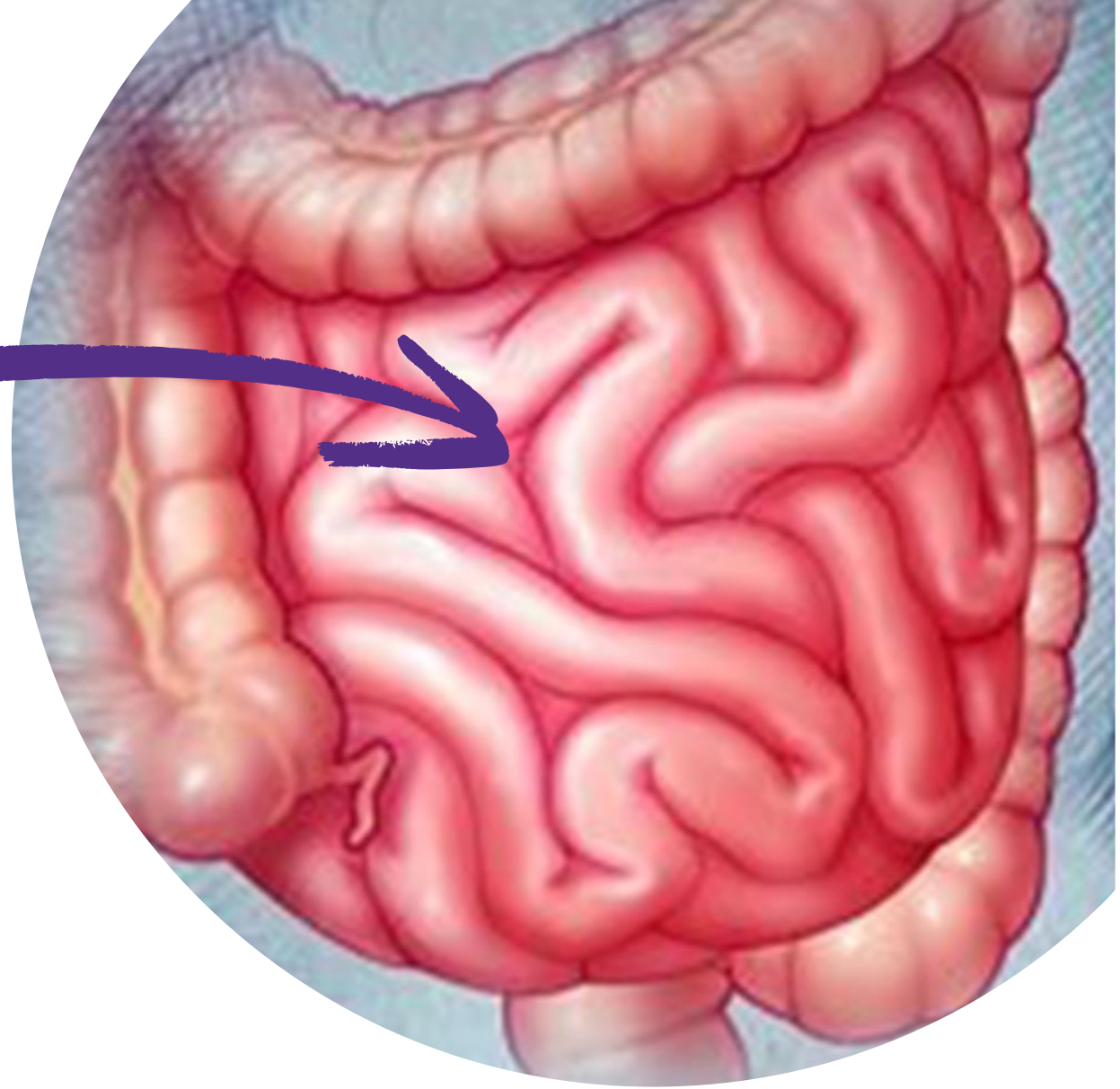
Section 4. EDP1815: Conclusion

The small intestine controls systemic inflammation

- The immune system of the small intestine is connected to the rest of the body via mesenteric lymph nodes.
- This is the small intestinal axis - SINTAX
- Gut-restricted medicines that harness SINTAX could send inflammation resolving signals throughout the body.
- SINTAX medicines have the potential to be
  - Oral
  - Effective
  - Safe
  - Affordable
- **EDP1815** is non-living preparation of a strain of *Prevotella histicola* sourced from a human duodenal biopsy.



Cells in the Small Intestine are Therapeutic Targets for SINTAX Medicines



Evelo's focus - **Small Intestine**

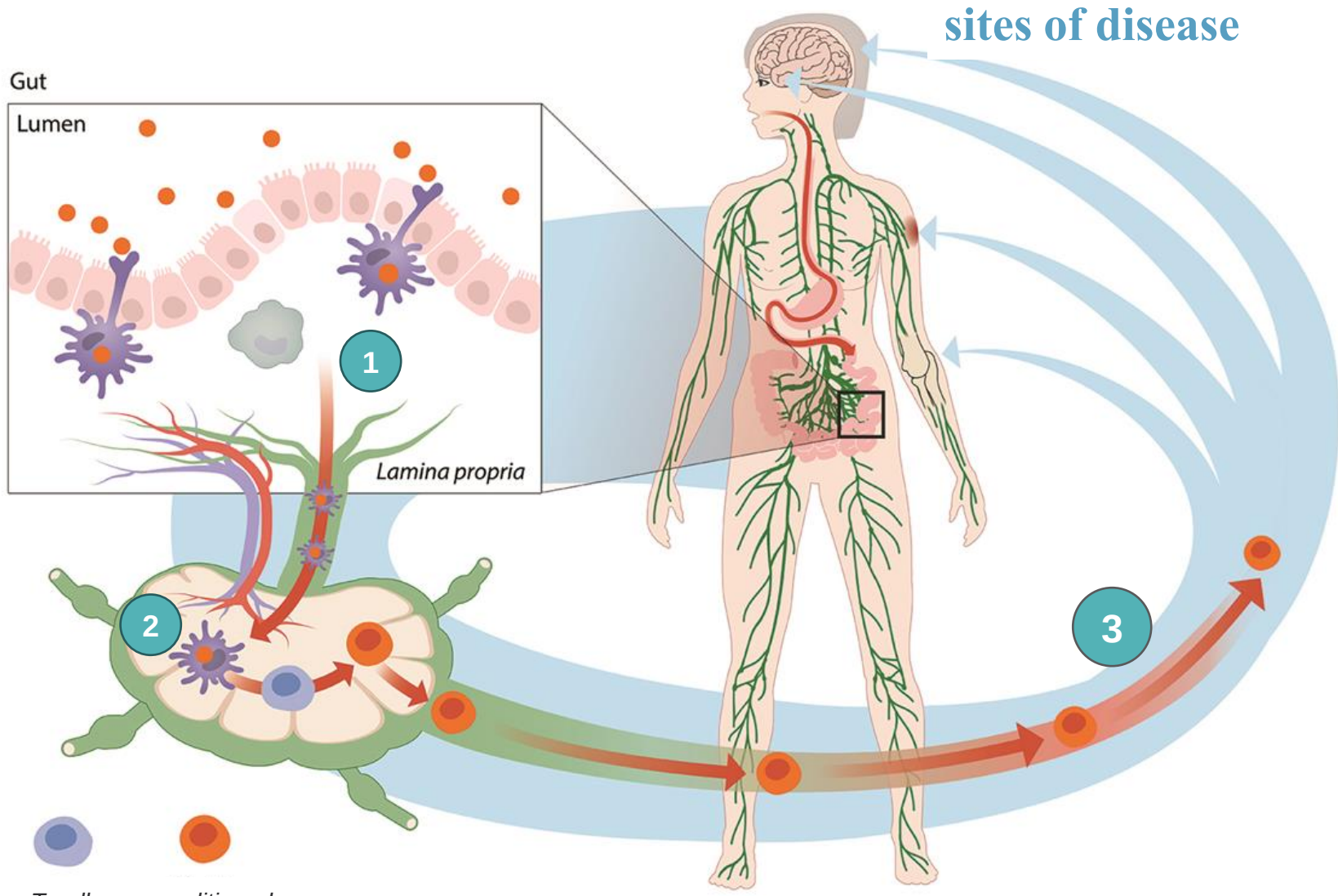
- Abundance of immune cells
- Sensing of signals and governing of inflammation throughout the body

EDP1815

- Targets the small intestine
- No modification or colonization of microbiome
- No systemic absorption

Mechanism of Action

1. **Sensing of SINTAX medicines by receptors and cells in the small intestine**
2. **Conditioning of T cells by dendritic cells and macrophages in lymph nodes**
3. **Migration of conditioned T-cells throughout the body**



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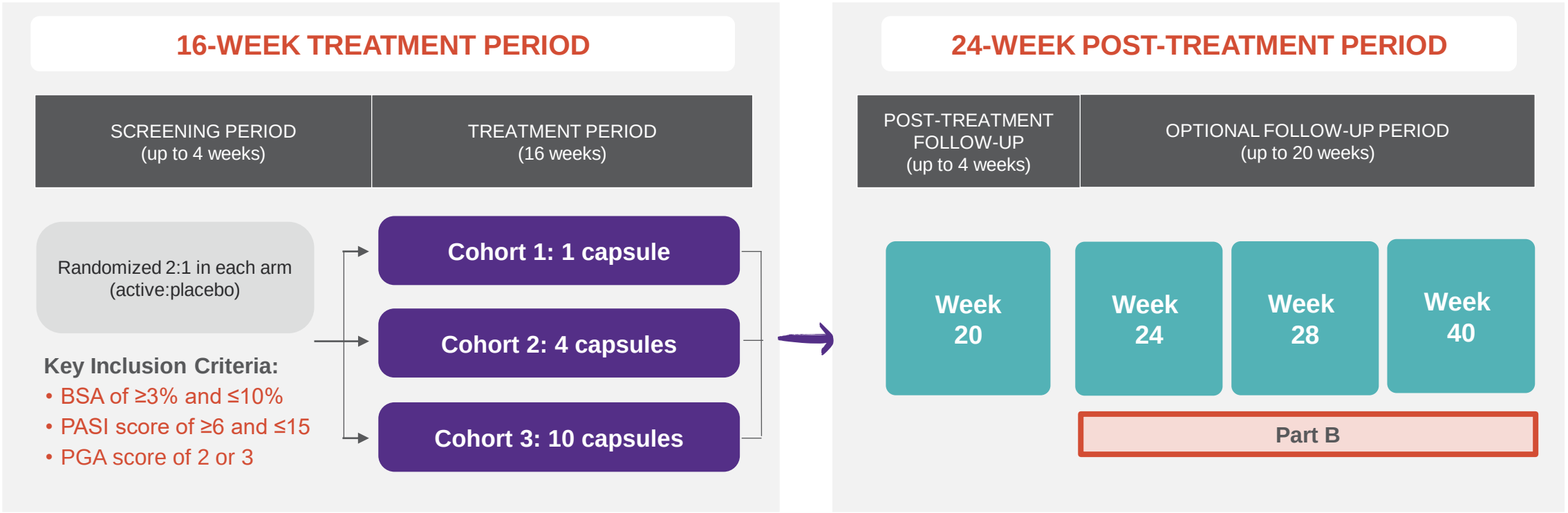
EDP1815 Phase 2 Trial in Mild and Moderate Psoriasis



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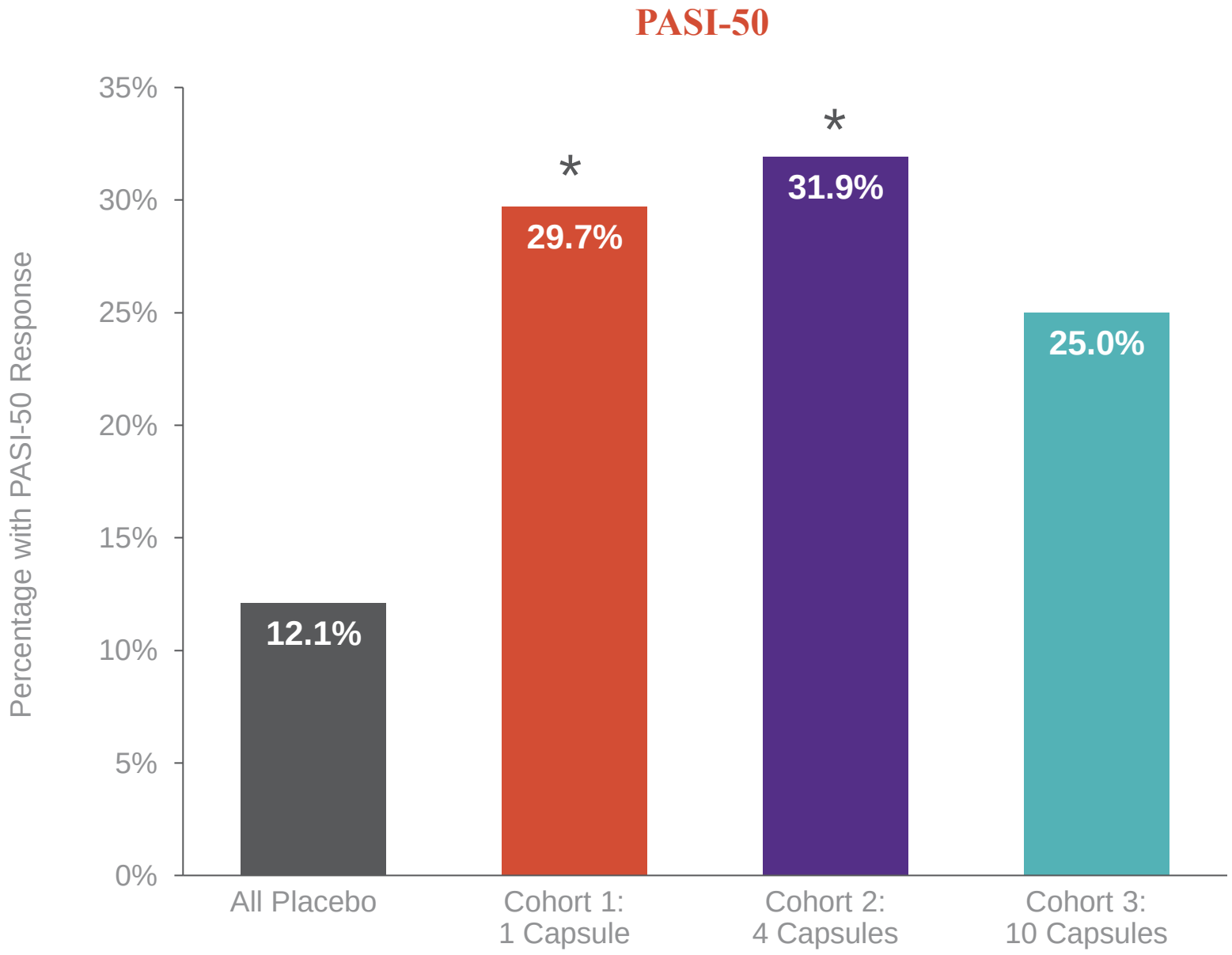
Robust PASI-50 Responses with EDP1815 at Week 16 across all 3 groups

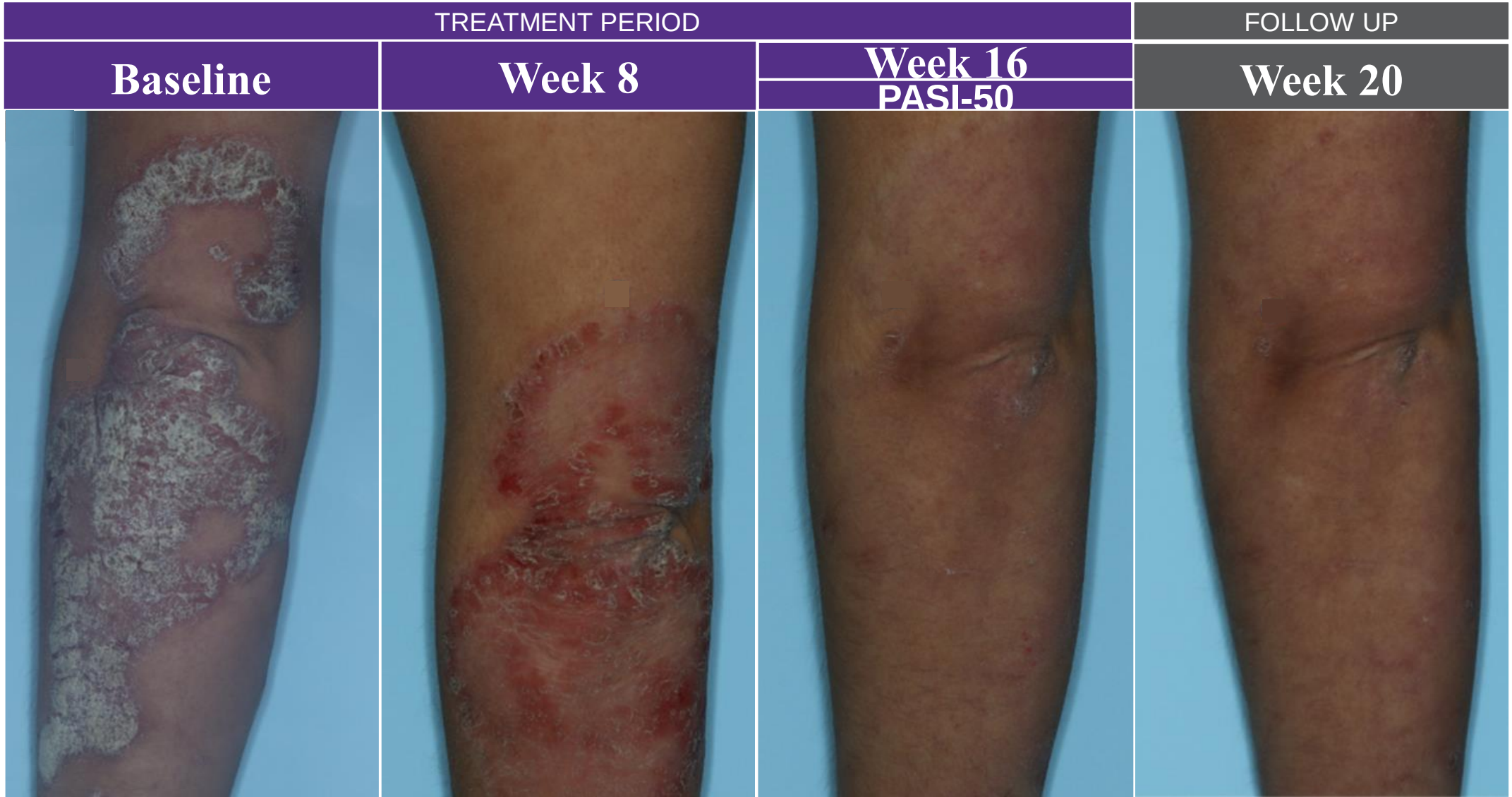
No evidence of a dose response



*p<0.05

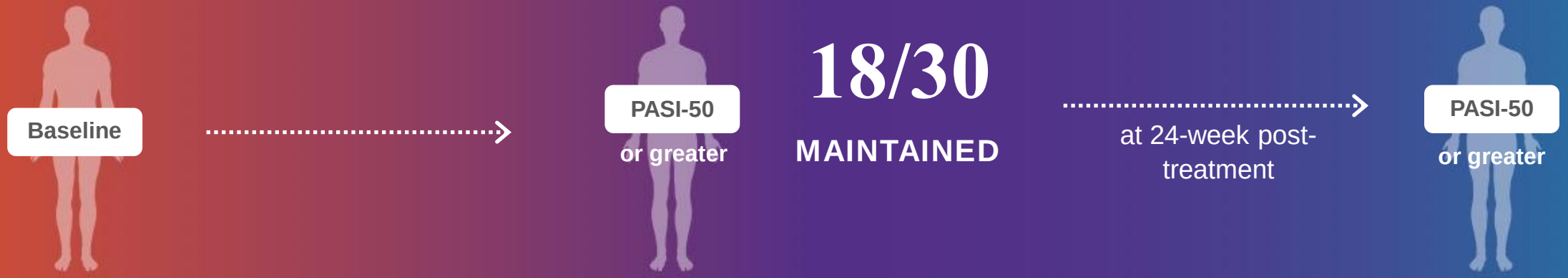
	PASI	PGA	DLQI	PSI
Baseline	10.3	3	12	24.1
Week 16	3.1	1	1	1.6

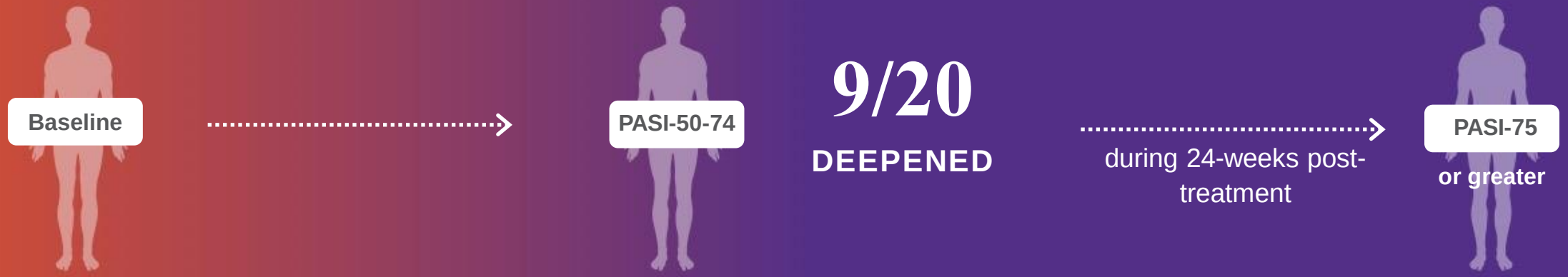
EDP1815 led to clinically meaningful responses



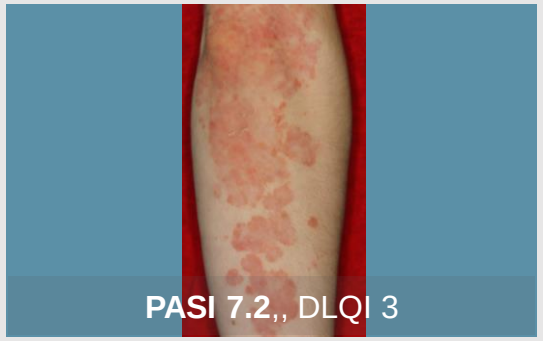
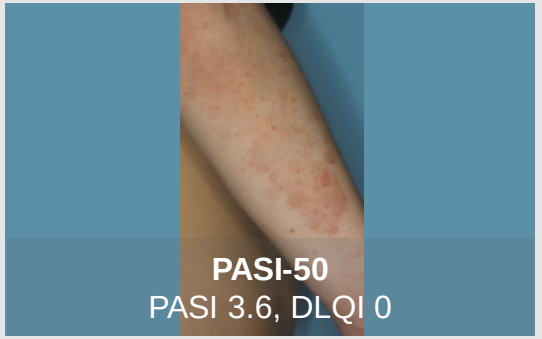
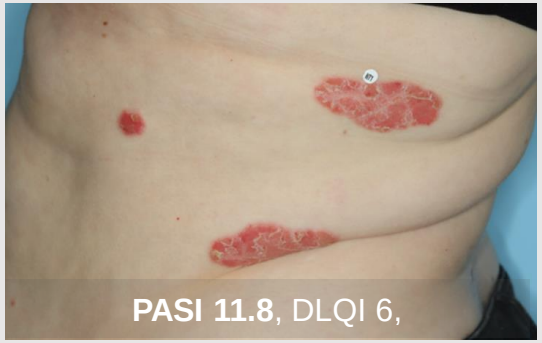
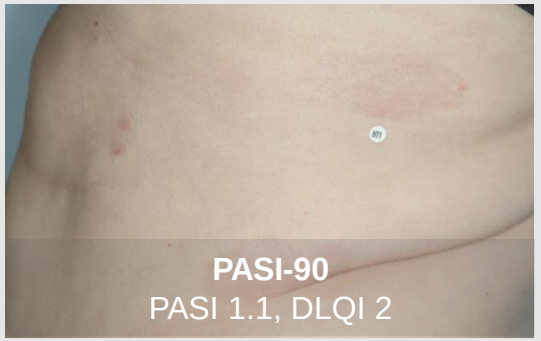
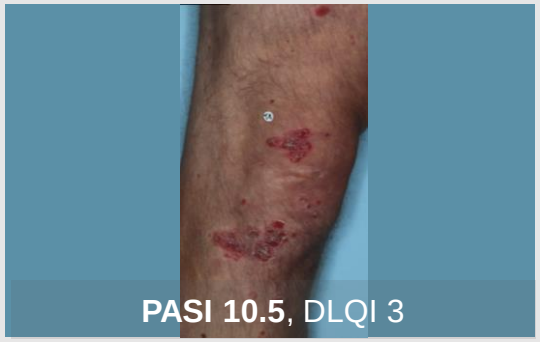
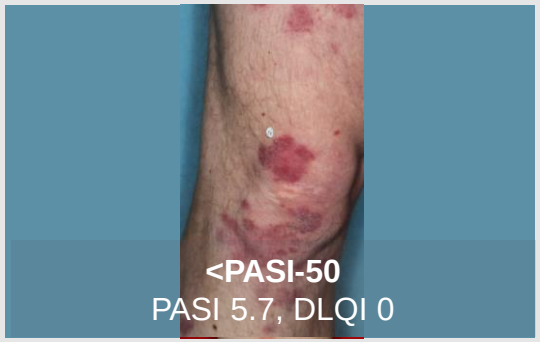
Durability and Deepening of Clinical Responses Observed in 24-Week Post-Treatment Period

16-Week Treatment Period	24-Week Post-Treatment Period





Deepening of Responses to PASI-75 or Greater During Post-Treatment Period

	BASELINE	WEEK 16	PEAK RESPONSE
WK 16 RESPONDER	 **PASI 7.2**,, DLQI 3	 **PASI-50** PASI 3.6, DLQI 0	**Week 40:** **>PASI-75**
	 **PASI 11.8**, DLQI 6,	 **PASI-90** PASI 1.1, DLQI 2	**Week 24:** **PASI-100**
WK 16 NON RESPONDER	 **PASI 10.5**, DLQI 3	 **<PASI-50** PASI 5.7, DLQI 0	**Week 28:** **>PASI-75**

EDP1815: Placebo-like Safety and Tolerability

- AE profile of EDP1815 is comparable to placebo
- No related SAEs. No ‘expected’ AEs
- Gastrointestinal or Infection AE rate comparable to placebo
- AE profile no different in the drug responders (≥PASI-50)

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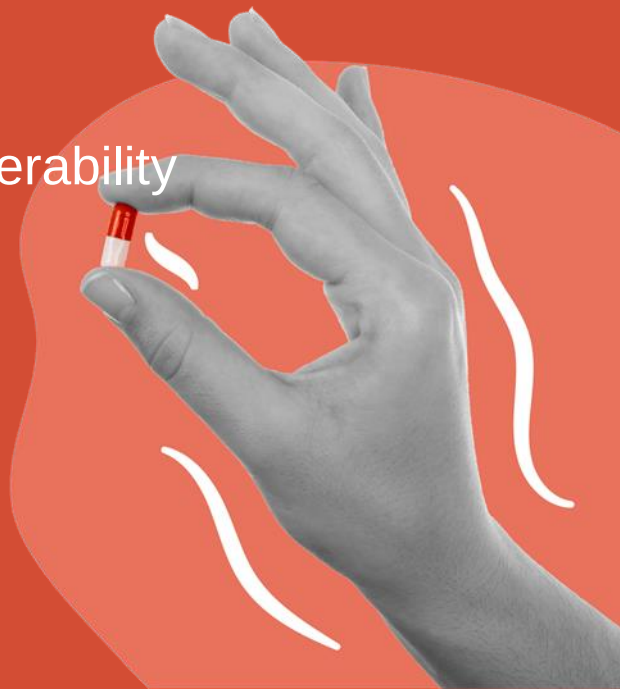
Phase 2 data demonstrate potential of EDP1815 as a foundational psoriasis treatment for all stages of disease

- Statistically significant and clinically meaningful improvements in **PASI-50 and PGA-0/1**
- Evidence of durability and deepening of response to **PASI-75** or greater off treatment
- Oral EDP1815 can driver potent effects with **placebo-like safety** and tolerability
- Coordinated reduction of disease-relevant inflammatory cytokines



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