



# THE ROAD TO REMISSION IN PLAQUE PSORIASIS

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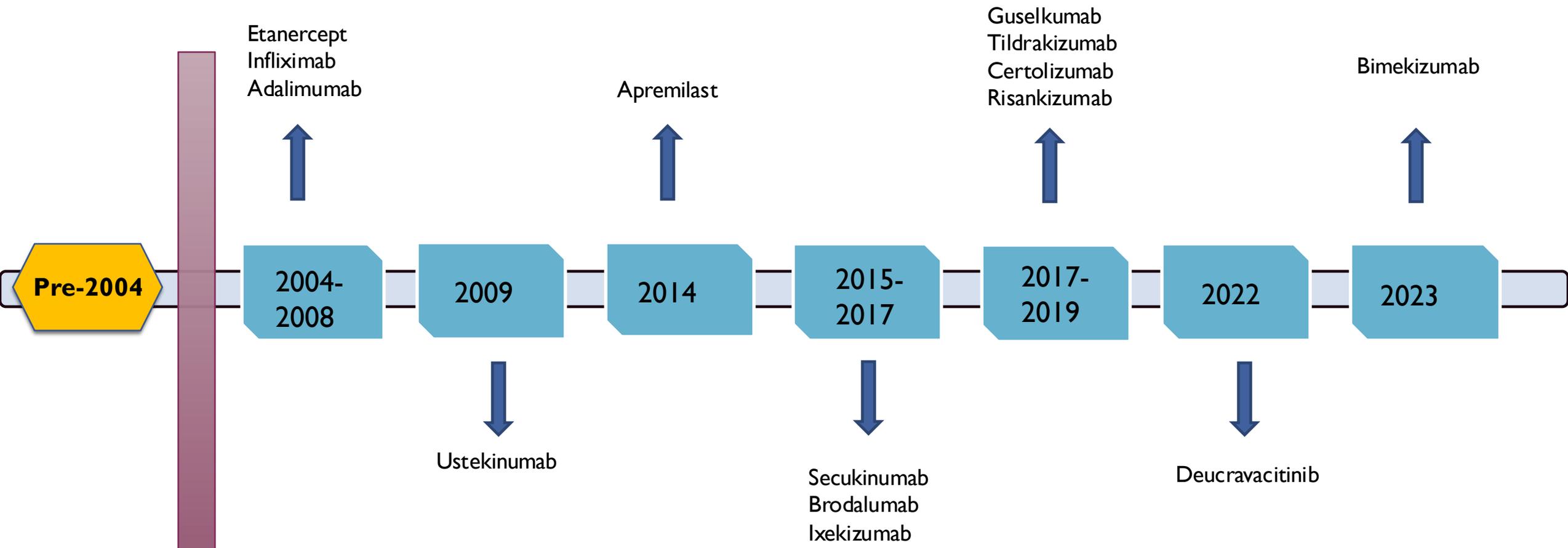
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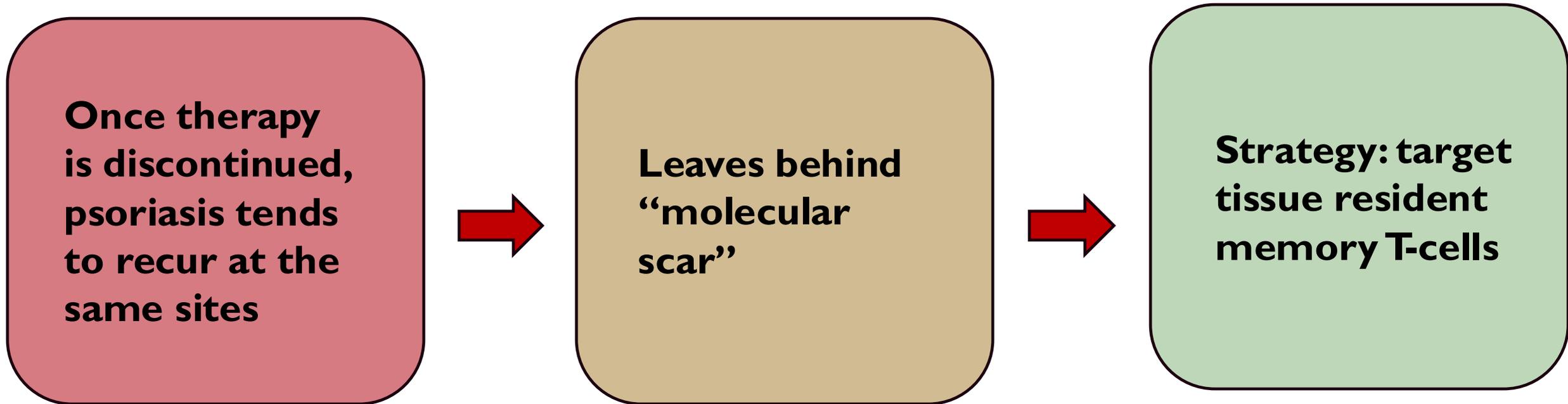
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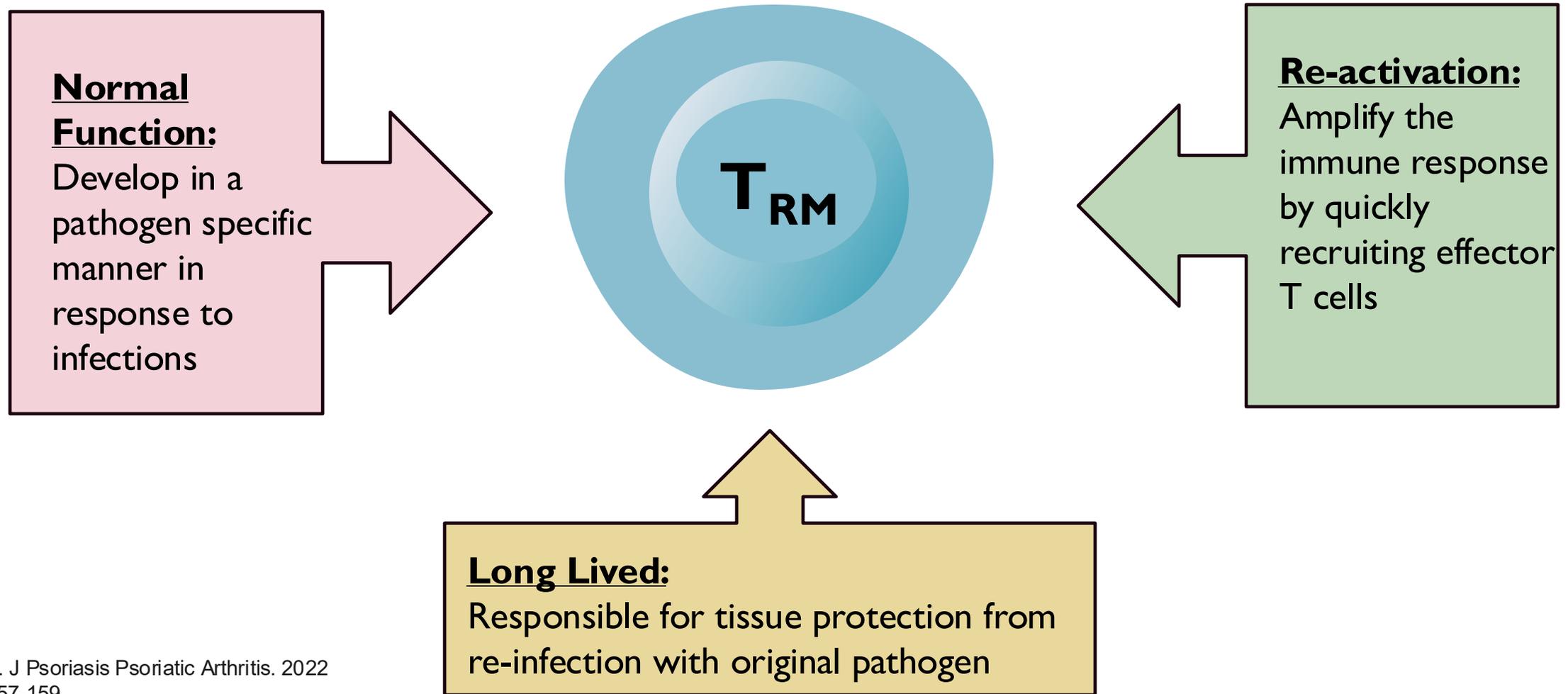
# THERAPIES FOR PLAQUE PSORIASIS



# WHY PSORIASIS COMES BACK...EVEN AFTER CLEARANCE

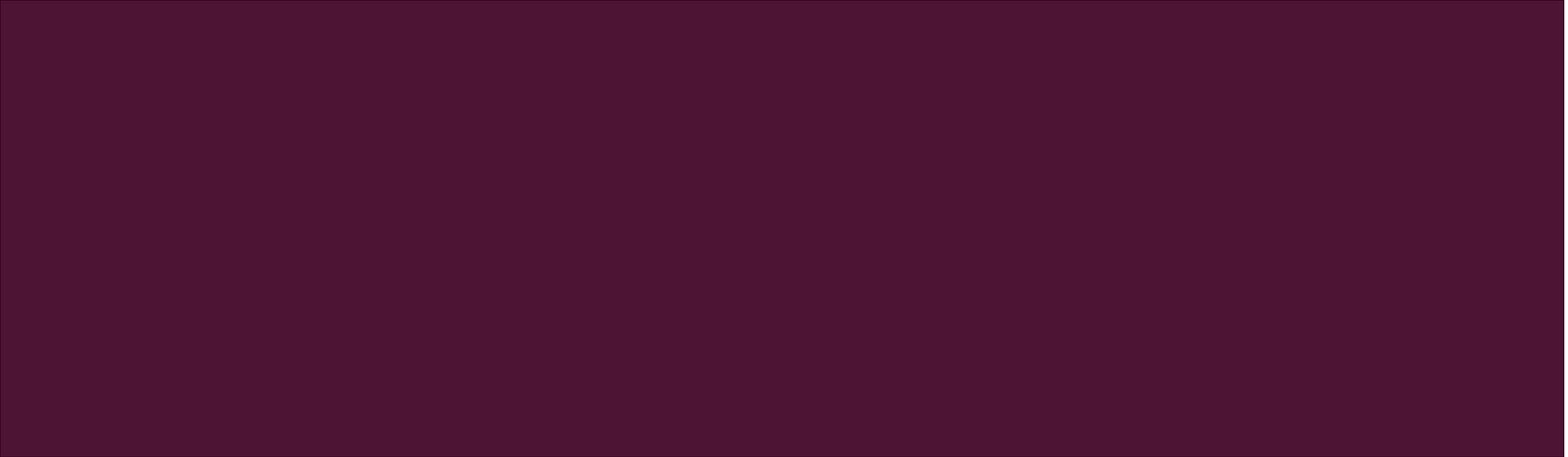


# WHAT IS THE ROLE OF THE TISSUE RESIDENT MEMORY CELLS?



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# CONCEPT 1: HIT PSORIASIS EARLY!



# THE WINDOW OF OPPORTUNITY

## Hypothesis:

Early stages of psoriasis → limited memory T cells have invaded the skin

## Hope:

Treat psoriasis early with biologics → potential disease modification

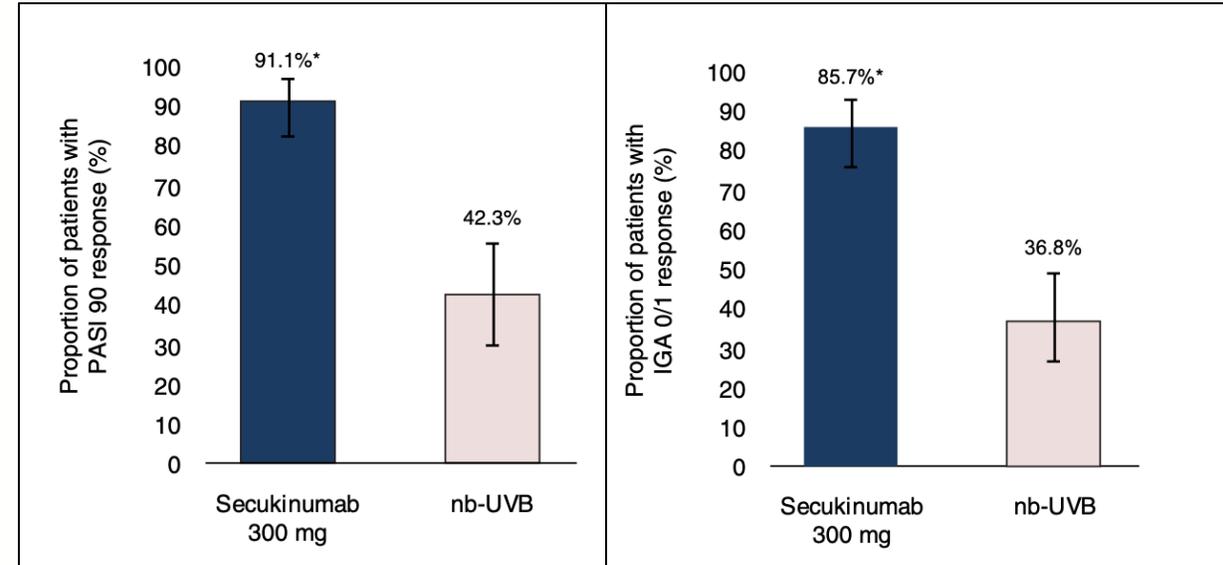
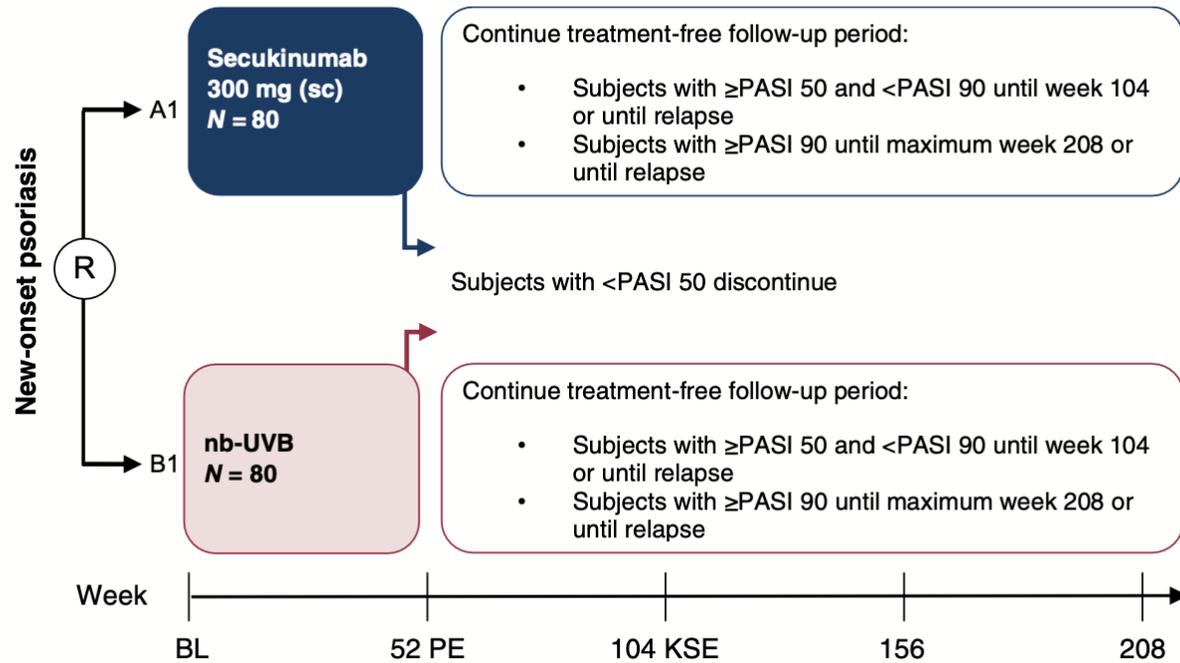
## Practical Problem:

Systemic agents including biologics are considered second-line



# SECUKINUMAB FOR THE TREATMENT OF NEW ONSET PSORIASIS

## STEPIn Study:



**New-onset psoriasis defined as  $<$ 12 months**

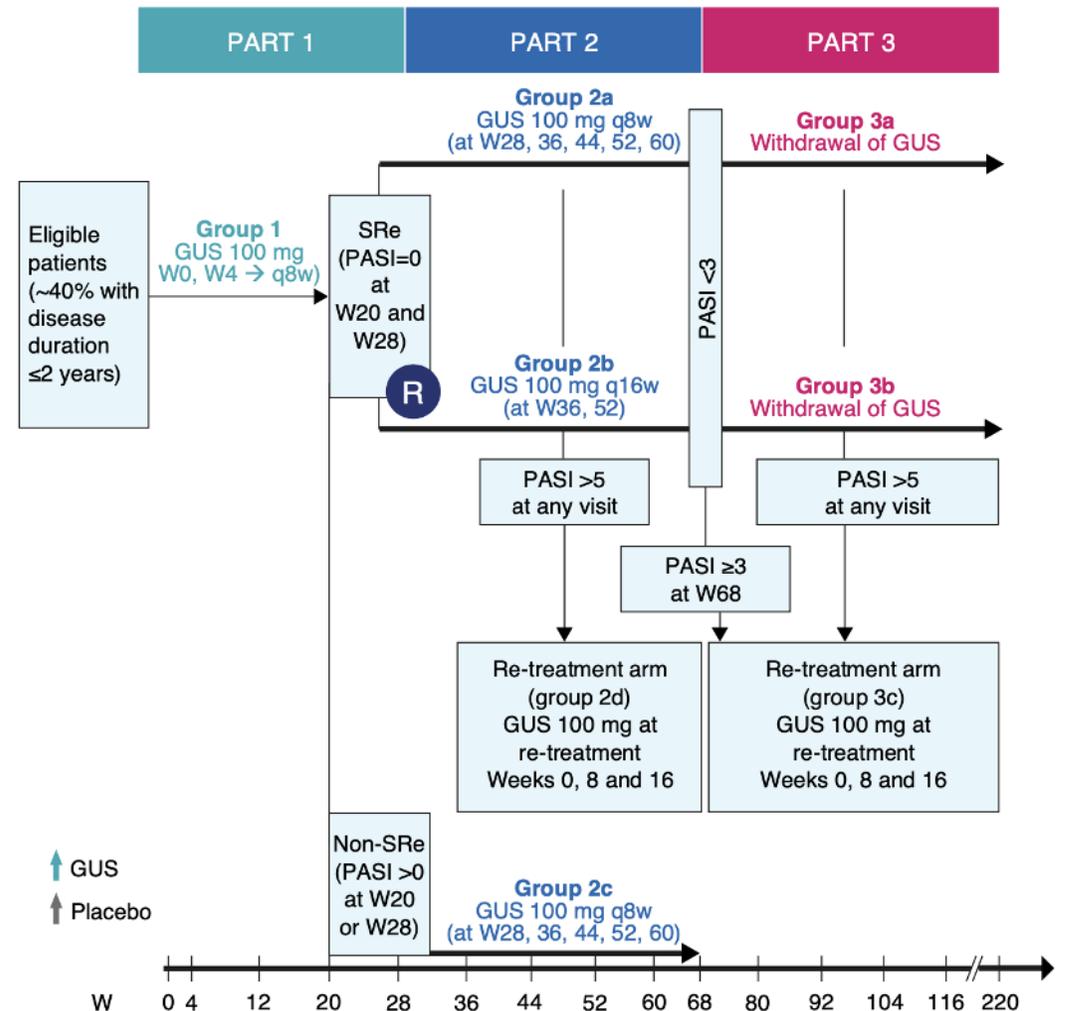
**SEC is superior to nb-UVB at 52wks**

# EARLY INTERVENTION WITH GUSELKUMAB FOR PSORIASIS

## GUIDE Study:

- **Part 1: Identify super-responders**
  - Achieved PASI 0 at wk 20 and wk 28
- **Part 2: Disease control with extended dosing intervals for super-responders**
- **Part 3: Super responders are withdrawn from GUS**
  - SRe was defined as PASI <3

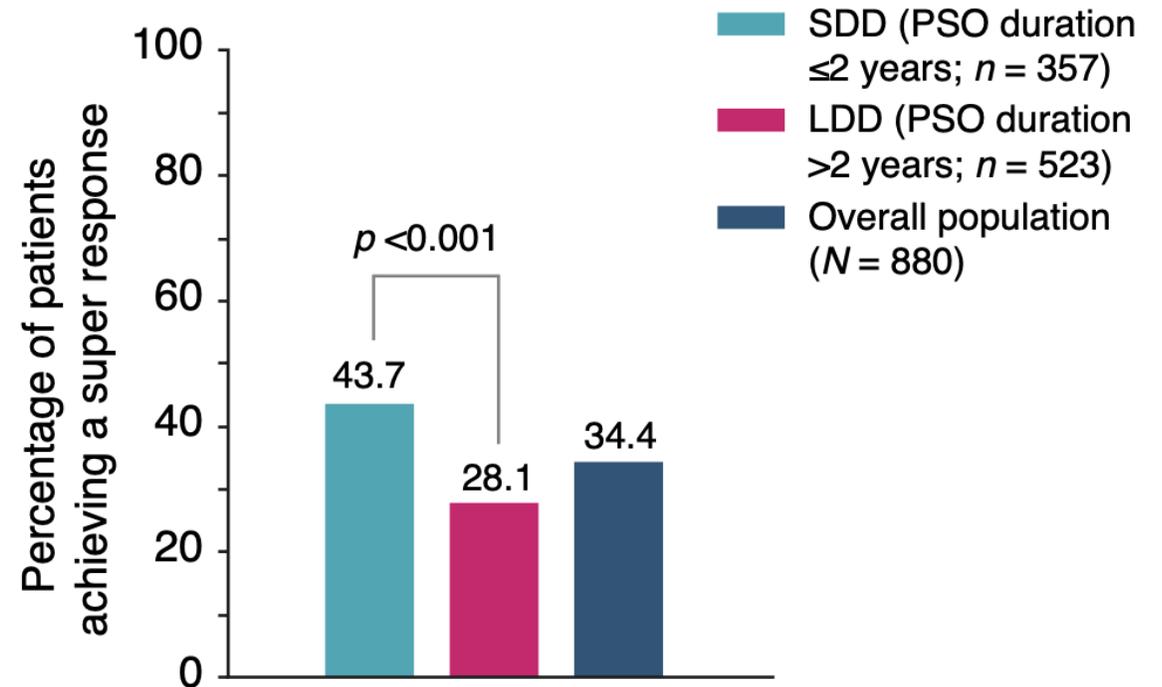
**Short disease duration was defined as  $\leq 2$  yrs**



# SHORT DISEASE DURATION CAN PREDICT SUPER RESPONSE

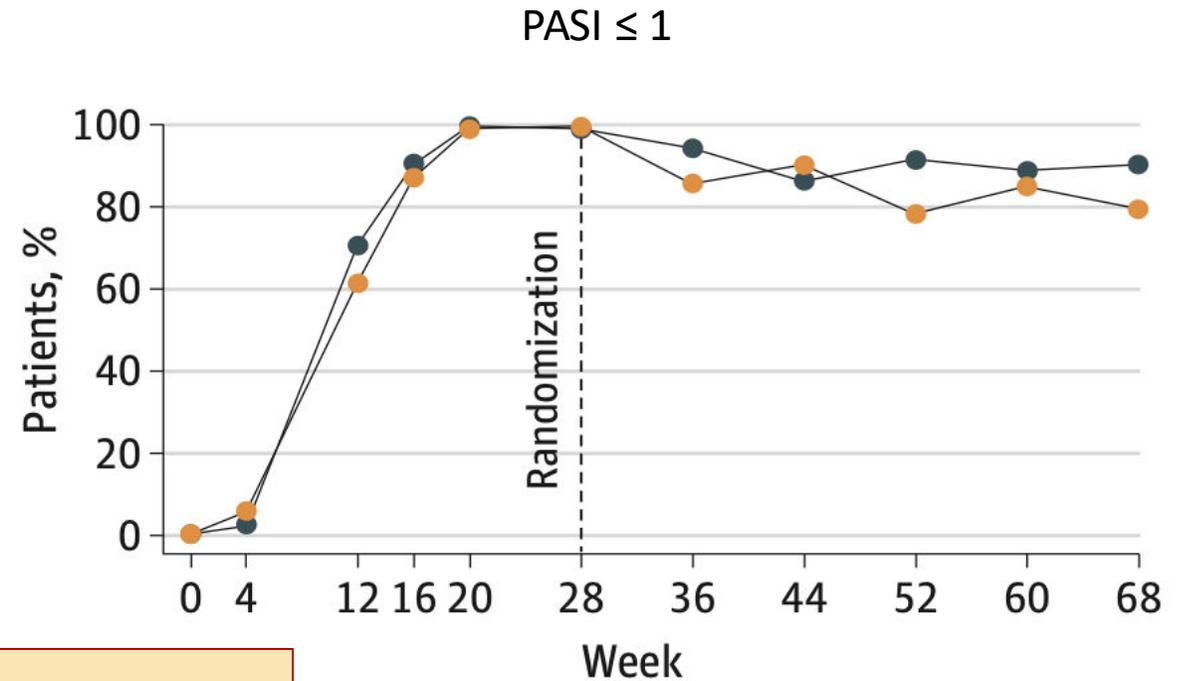
- Patients who had disease for  $\leq 2$  yrs (short disease duration) had a higher likelihood of being a super-responder to standard GUS therapy

**Super Response: PASI 0 at wk 20 and wk 24**



# SUPER RESPONDERS ARE MORE LIKELY TO MAINTAIN DISEASE CONTROL WITH LESS FREQUENT DOSING

- A high rate of  $\text{PASI} \leq 1$  response was maintained over time in super responders, regardless of the dosing interval



## Take Home Points:

- Those who are treated early in their psoriasis disease course:
  - More likely to achieve complete skin clearance
  - More likely to be able to down-titrate to every 16 wk dosing

- Every 8 weeks
- Every 16 weeks

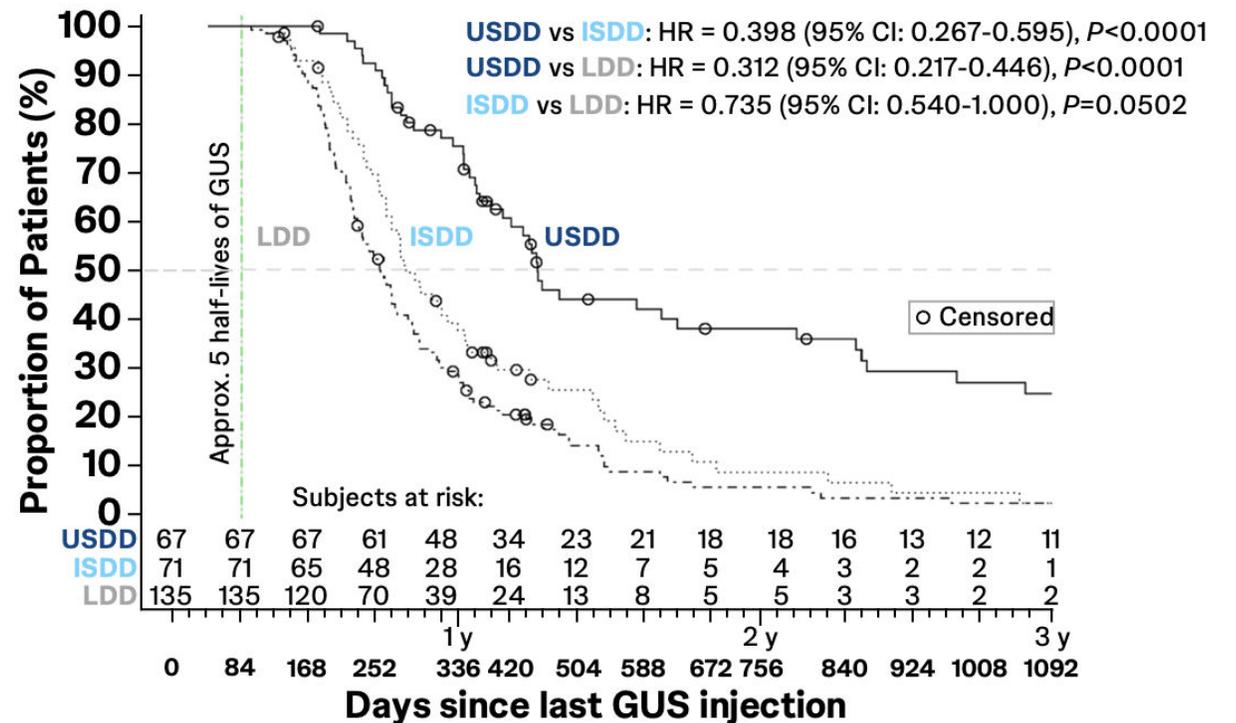
# SUPER RESPONDERS TREATED EARLY IN THEIR DISEASE COURSE

- At wk 68, those with a PASI <3 were withdrawn from GUS
- They were retreated if they had loss of response defined as PASI>5

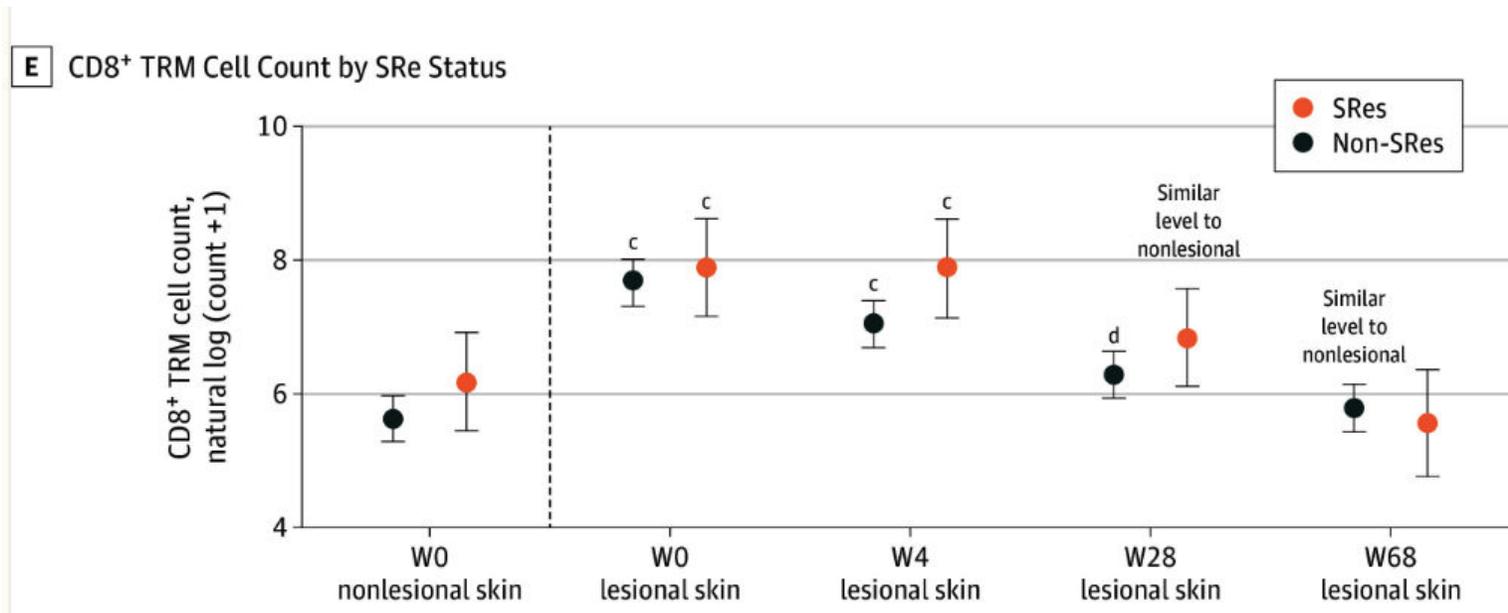
## Take Home Points:

- Those who are treated early in their psoriasis disease course (<15months disease duration) have slower recurrence of psoriasis than those with longer disease duration

Proportion of patients who remain treatment-free by disease duration (USDD <15 months, ISDD 15-34 months, or LDD >24 months).



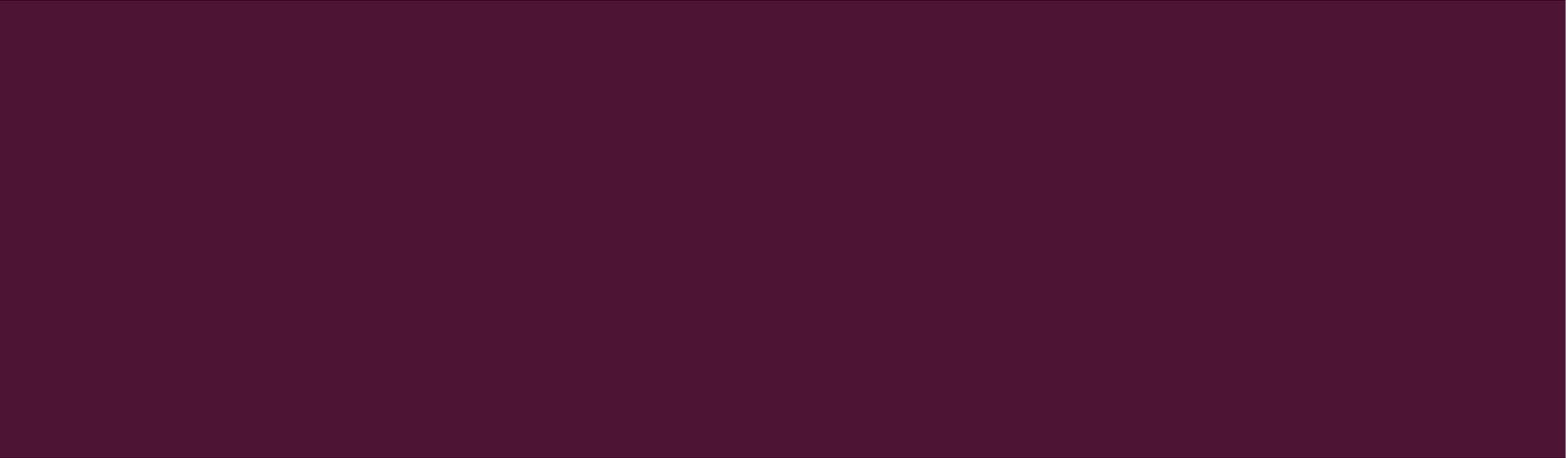
# SUPER RESPONDERS SHOW FASTER NORMALIZATION OF MEMORY T CELL COUNTS TO NON-LESIONAL SKIN LEVELS



- A reduction of resident memory T cell counts in lesional skin, to nonlesional skin levels, was seen at wk 28 in super responders but not till wk 68 in non-super responders
- IL-23 has a key role in differentiation, expansion and survival of TRM.

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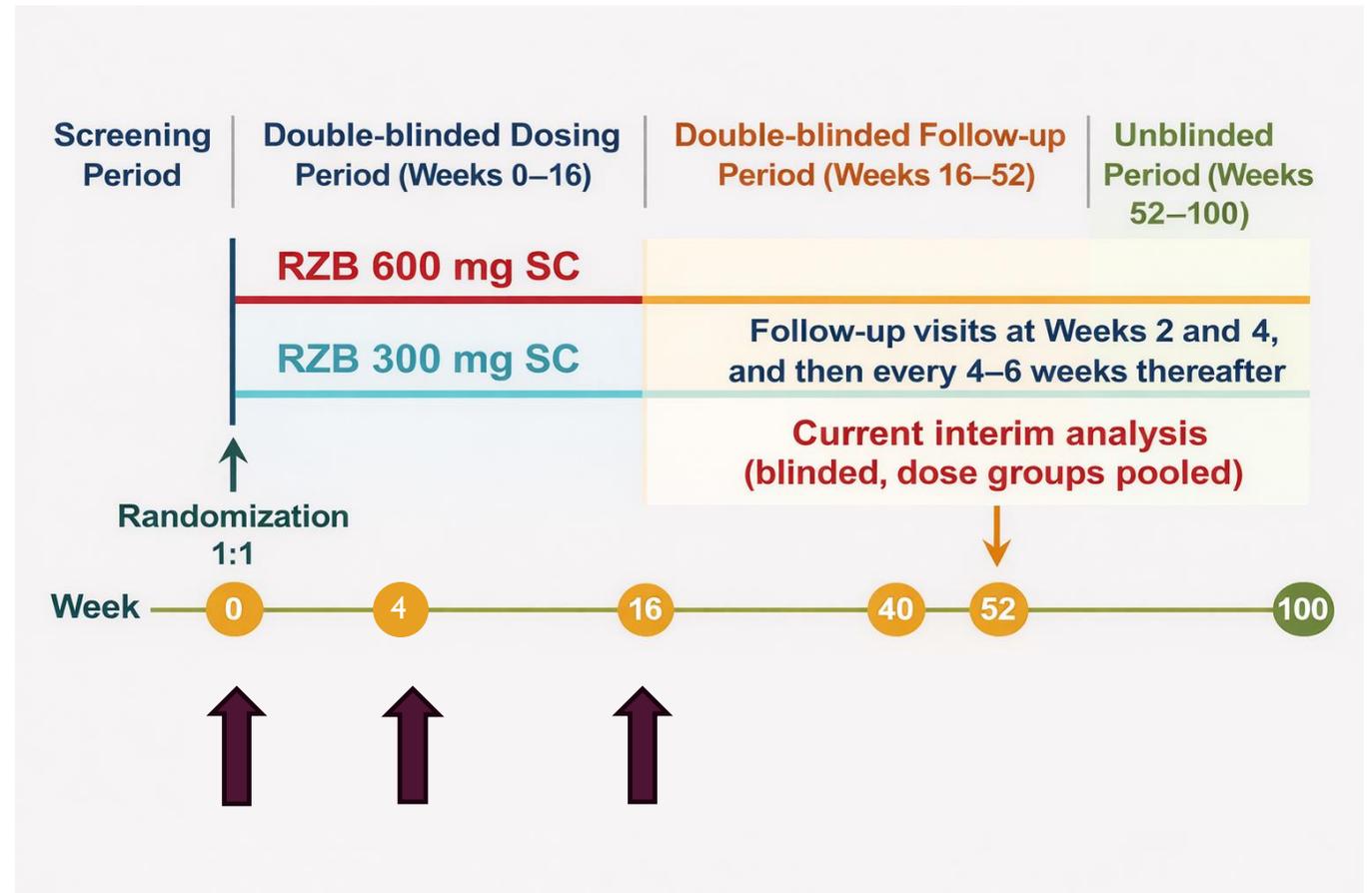
# CONCEPT 2: HIT PSORIASIS HARD!



# HIGH INDUCTION DOSING OF RISANKIZUMAB FOR PSORIASIS

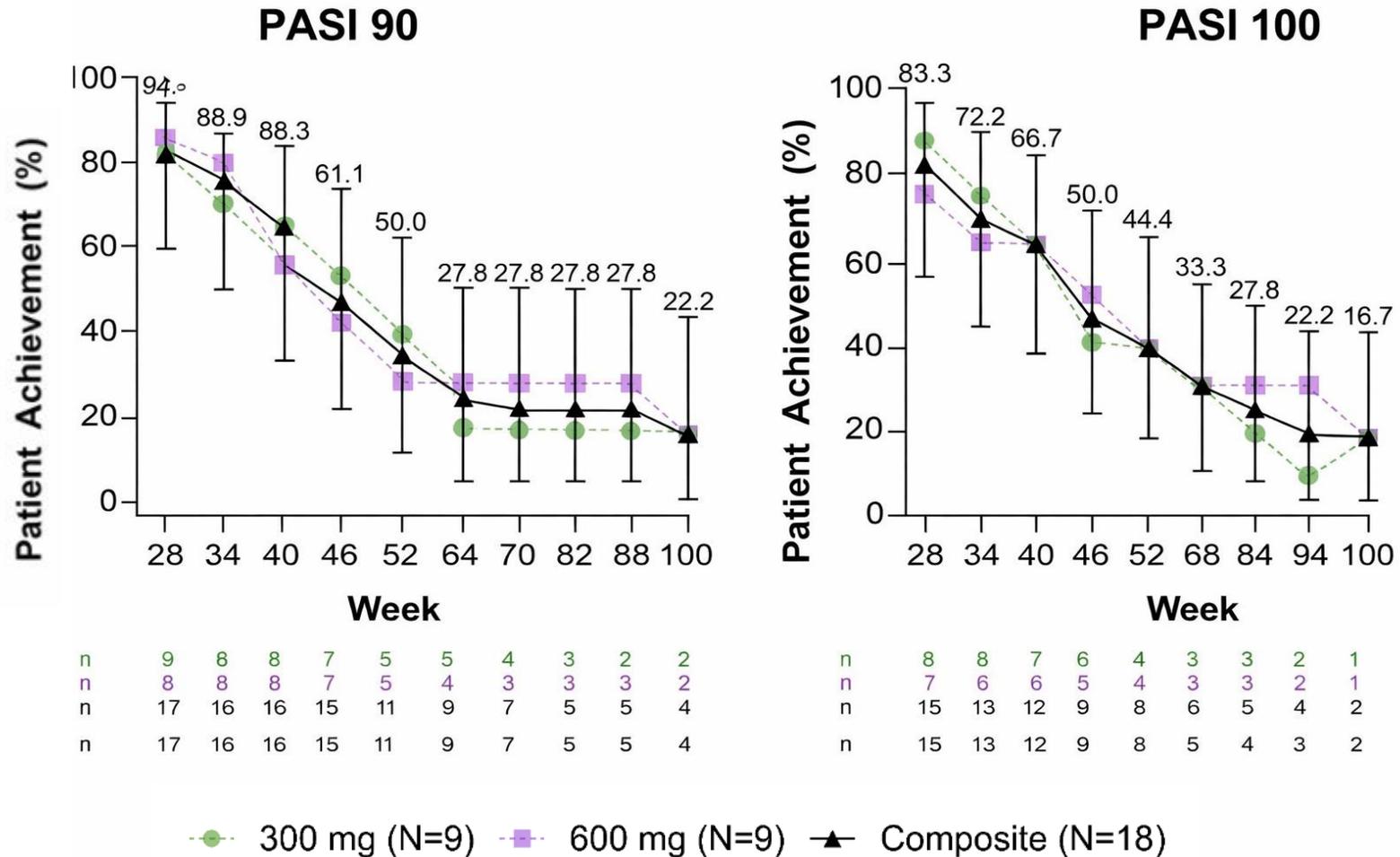
## **KNOCKOUT Study, Phase 2:**

- Primary Endpoint: Change from baseline in TRM cell number
- Secondary endpoints:
  - ❖ PASI 100 at wk 28, 40, 52
  - ❖ Safety at wk 52





# LONG TERM DURABILITY



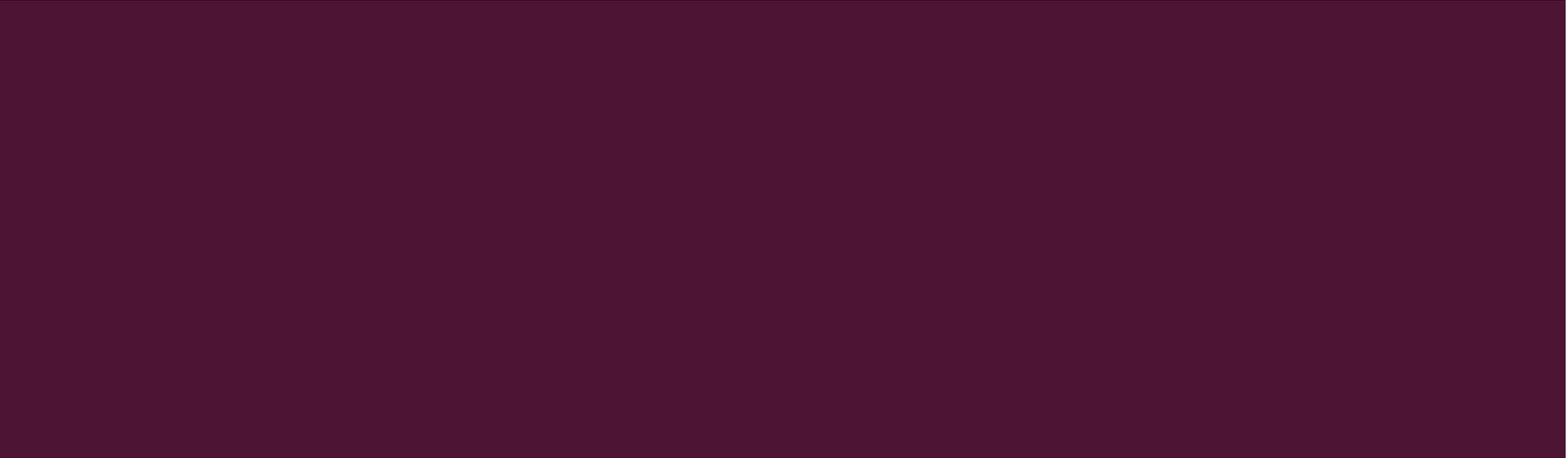
# SAFETY OF HIGH DOSE RISANKIZUMAB

Treatment Emergent Adverse Events (TEAE) (Events/100PY)	300 mg (N=10)	600mg (N=10)
Any TEAE	11 (164.2)	11 (166.7)
Any serious TEAE	1 (14.9)	0
Any AE that was drug related	0	0
Any TEAE resulting in study drug discontinuation	0	0
Deaths	0	0

- No new safety signals with the higher dose
- Higher doses were well tolerated with safety that was consistent with the 150mg dose

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PUTTING IT ALL TOGETHER:  
HIT EARLY AND HIT HARD?

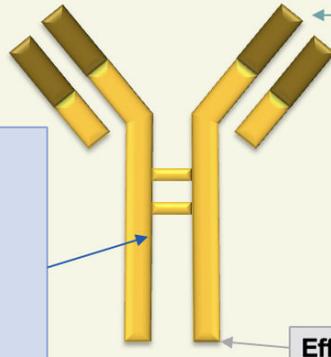


# THE NEXT FRONTIER

**CURE!**

# ORKA-001: EXTENDED HALF-LIFE MONOCLONAL ANTIBODY TARGETING IL-23

**ORKA-001**



**Half-life extension through validated Fc modification (YTE substitutions) creates potential for:**

- Higher exposure to increase efficacy
- Longer exposure to reduce dosing frequency

**Binds specifically to IL-23p19**

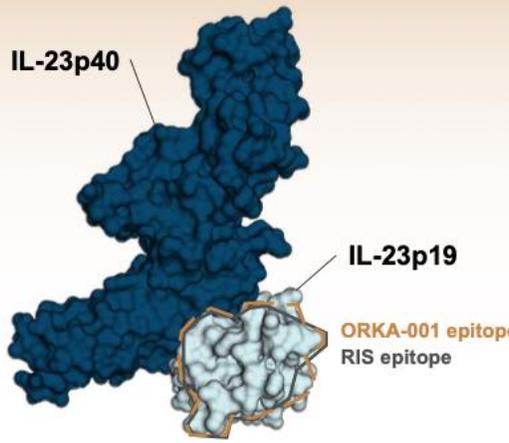
- Validated MoA
- Similar epitope to RZB
- Similar potency to RZB

**Effector-null human IgG1 Fc**

- M252Y/S254T/T256E (“YTE”) amino acid substitutions to the Fc region of antibodies increases the pH-dependent binding affinity to FcRn
- YTE substitution results in increased antibody recycling, causing less lysosomal degradation and thus a prolonged half-life of the antibody

**Figure 4: ORKA-001 binds IL-23p19 at a similar epitope as risankizumab with similar affinity**

- ORKA-001 and RIS demonstrate comparable high affinity for IL-23p19 ( $K_D < 5 \text{ pM}$ ).
- Cryo-EM structural analysis demonstrates that ORKA-001 has a nearly identical epitope as RIS (Figure 4).



**IL-23p40**

**IL-23p19**

**ORKA-001 epitope**

**RIS epitope**

# EVERLAST-A: PHASE 2A TRIAL OF ORKA-001 IN ADULTS WITH MODERATE TO SEVERE PSORIASIS

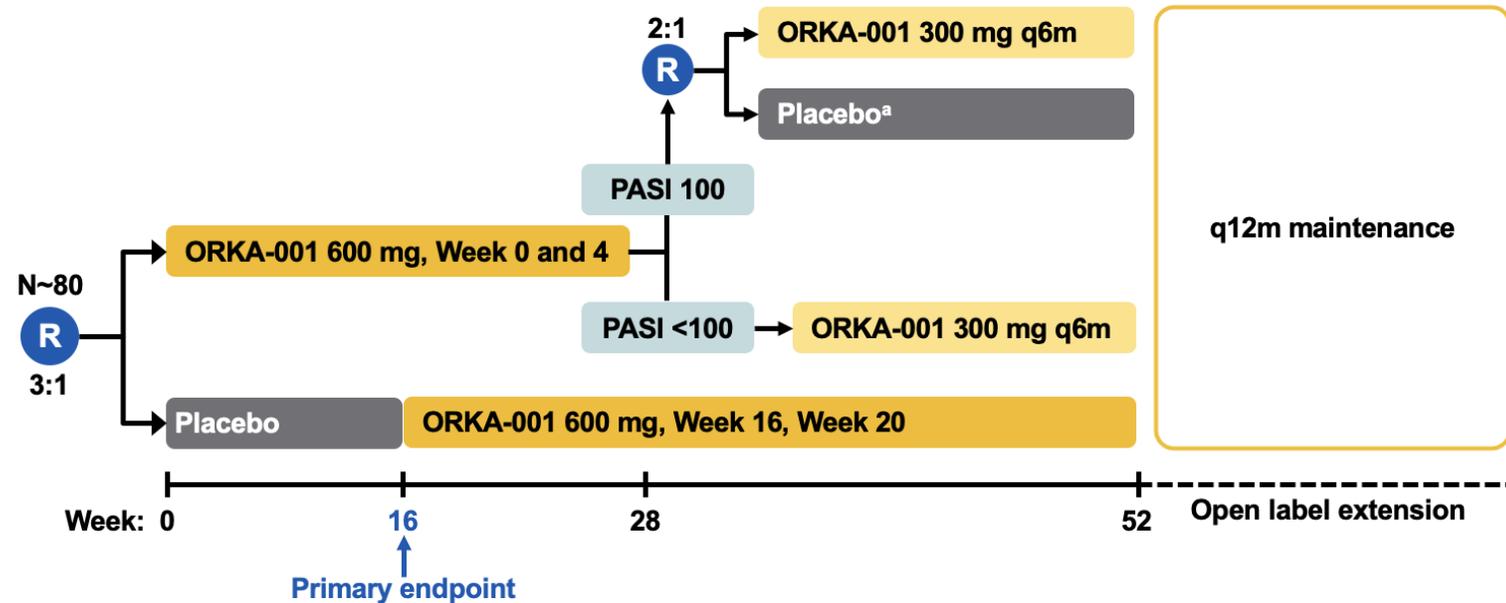
## Eligibility criteria

- Age  $\geq 12$  years
- Plaque psoriasis for  $\geq 6$  months
- PASI score  $\geq 12$ ; IGA  $\geq 3$ ; BSA  $\geq 10\%$
- Candidate for systemic or phototherapy

## Primary endpoint

- PASI 100 at Week 16

Currently enrolling in the US and Canada



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# PUTTING IT ALL TOGETHER: HIT EARLY AND HIT HARD?

Phase 3 studies of ORKA-001 will enroll a subset (10-20%) of short disease duration patients (psoriasis for less than 1 year) so we can finally answer this question

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*THANK YOU!*

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