

# Oral Sarecycline for Moderate to Severe Acne Vulgaris

## Results from Two 12-Week, Phase 3, Randomized, Double-blind Clinical Trials

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### Objective

- To evaluate the efficacy and safety of sarecycline, a once-daily, narrow-spectrum tetracycline-class drug in moderate to severe acne

### Introduction

- Oral broad-spectrum tetracycline-class antibiotics are prescribed for the treatment of moderate to severe inflammatory acne
- Poor tolerability and bacterial resistance concerns may limit the use of broad-spectrum tetracycline antibiotics for the treatment of acne

### Design & Methodology

Male and female  
Aged 9 to 45 years  
Between 33 kg and 136 kg

Moderate to severe (IGA  $\geq 3$ ) facial acne  
20 – 50 Inflammatory Lesions  
 $\leq 100$  Noninflammatory Lesions  
 $\leq 2$  Nodules

Subjects randomized 1:1 to  
Sarecycline 1.5 mg/kg/day oral or Placebo

- Two phase 3 multicentre, randomized, double-blind, placebo-controlled, parallel group studies.
- Up to 35 day screening period to establish eligibility and baseline
- 12 week double-blind treatment with study visits at 3, 6, 9, and 12 weeks

- Co-primary efficacy endpoints:
  - Absolute change in facial inflammatory lesion count at week 12
  - IGA Success – IGA score of 0 (clear) or 1 (almost clear) and  $\geq 2$  point improvement from baseline
- Secondary endpoints included absolute and percent change from baseline in inflammatory lesions at weeks 3, 6, & 9.

### Results

In SC1401 and SC1402 (Table 1) IGA success rates were 21.9% and 22.6% (sarecycline) versus 10.5% and 15.3% (placebo;  $P < .0001$  and  $P = .0038$ ). Onset of efficacy in inflammatory lesion reduction occurred as early as week 3, with mean percentage reduction in inflammatory lesions at week 12 in SC1401 and SC1402 of 52.5% and 50.8% (sarecycline) versus 35.2% and 36.4% (placebo) (Figs 1 & 2). Efficacy on truncal acne in (Fig 3). Adverse events  $\geq 2\%$  in any group are shown in Table 2.

Table 2. Adverse Events  $\geq 2\%$  in any group

TEAEs	SC1401		SC1402	
	Sarecycline n = 481	Placebo n = 483	Sarecycline n = 513	Placebo N = 513
Nausea	4.6%	2.5%		
Nasopharyngitis	3.1%	2.9%	2.5%	2.9%
Headache	2.7%	2.7%	2.9%	4.9%
Vomiting	2.1%	1.4%		

Vestibular, phototoxic, vulvovaginal candidiasis, and mycotic infections  $\leq 1.1\%$  in sarecycline treated patients. Gastrointestinal TEAE rates were low

Table 1. IGA Success and Inflammatory Lesion Efficacy at Week 12

Outcome Measure	SC1401			SC1402		
	Sarecycline n = 483	Placebo n = 485	P	Sarecycline n = 519	Placebo n = 515	P
IGA Success*	21.9%	10.5%	0.0001	22.6%	15.3%	0.0038
Mean Percent Reduction in Inflammatory Lesions	52.2%	35.2%	0.0001	50.8%	36.4%	0.0001

\*Note: IGA Success defined as  $\geq 2$ -grade improvement and score 0 [clear] or 1 [almost clear]



Fig 1 & 2. Mean % Reduction in Inflammatory Lesions

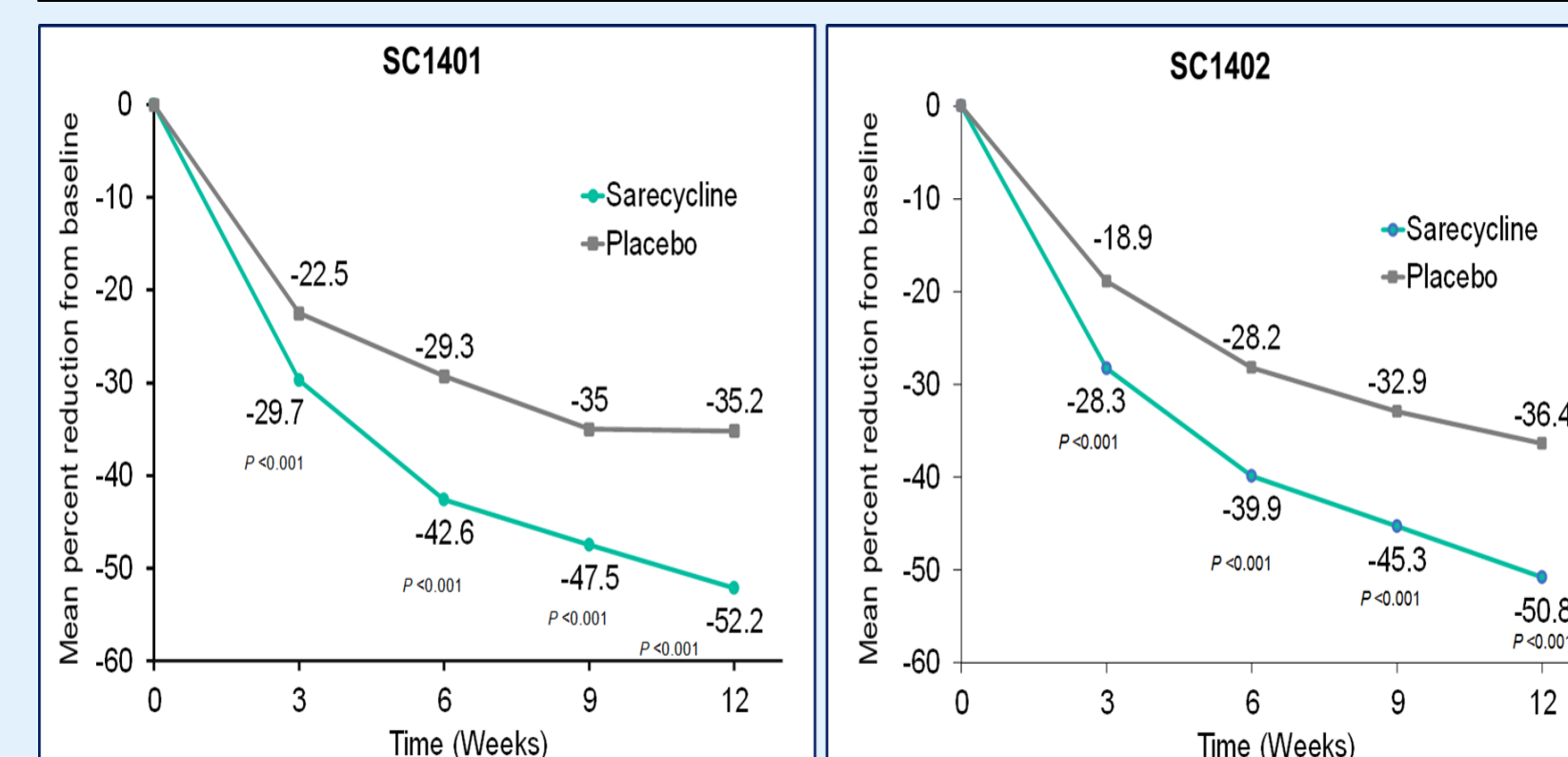
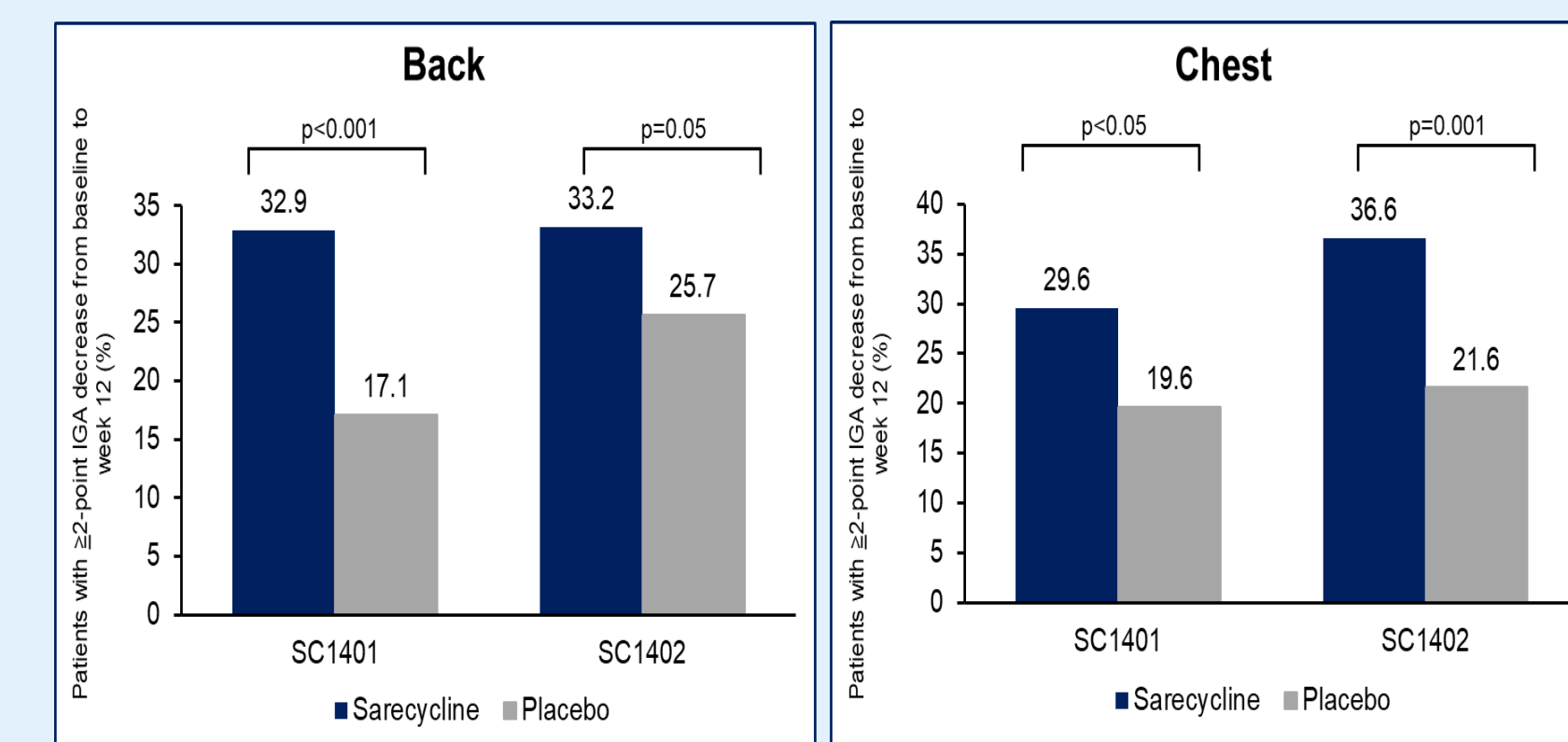


Fig 3. Truncal Acne: % of Patients with IGA success at WK 12



### Conclusions

- Sarecycline, a narrow-spectrum tetracycline class antibiotic, FDA-approved for the treatment of moderate to severe acne in ages 9 and older, was safe, well tolerated, and statistically significant at 12 weeks in achieving IGA Success (defined as  $\geq 2$ -grade improvement and score 0 [clear] or 1 [almost clear]) and reduction in inflammatory lesion count.