

# REMIX-1/-2: Long-term efficacy of remibrutinib in patients with CSU from the European region

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## KEY FINDINGS & CONCLUSIONS

- The findings of European region subgroup analysis reflect those of the overall population: **fast efficacy of remibrutinib as early as week 1**, with **further improvements observed at week 12** that were **sustained up to week 52**
  - By week 52, the **majority of patients had complete control (UAS7 = 0)** and **well-controlled disease (UAS7 ≤6)** in both **remibrutinib arm** (UAS7 = 0: 57.0%; UAS7 ≤6: 78.1%) and **placebo-remibrutinib transitioned arm** (UAS7 = 0: 53.8%; UAS7 ≤6: 73.1%)
- Overall, remibrutinib showed a **favourable safety profile** across the REMIX-1/-2 studies
- Remibrutinib has the **potential to be an effective oral treatment option** for patients with CSU remaining symptomatic despite treatment with H<sub>1</sub>-AH

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## INTRODUCTION

- Chronic spontaneous urticaria (CSU) is characterised by the spontaneous occurrence of itch, wheals (hives) and/or angioedema lasting for more than 6 weeks, without an identifiable trigger<sup>1</sup>
- In the REMIX-1 and REMIX-2 studies, remibrutinib, an oral, highly selective Bruton's tyrosine kinase inhibitor, has shown superior efficacy versus placebo and a favourable safety profile when administered as an add-on medication in patients with CSU who remain symptomatic despite treatment with second-generation H<sub>1</sub>-antihistamines (H<sub>1</sub>-AH)<sup>2-5</sup>
- Although patients with CSU may undergo spontaneous remission, the efficacy of treatment in achieving early disease control is a key treatment goal

## OBJECTIVE

- In this pooled analysis, we assessed the efficacy of remibrutinib in patients with CSU from the European region who participated in the phase 3 REMIX-1 and REMIX-2 studies

## METHODS

### Study Design<sup>2,3</sup>

- REMIX-1 and REMIX-2 were identical, multicentre, randomised, double-blind, placebo-controlled studies assessing the efficacy and safety of remibrutinib in adult patients with CSU who remain symptomatic despite treatment with second-generation H<sub>1</sub>-AH
- Patients were randomised 2:1 to oral remibrutinib 25 mg twice daily (bid) or placebo over a 24-week double-blind period, followed by 28-week open-label treatment with oral remibrutinib 25 mg bid. At week 24, patients on placebo transitioned to remibrutinib (**Figure 1**)

## RESULTS

### Baseline Demographics and Clinical Characteristics

- Patient demographics and baseline characteristics in the European subpopulation were comparable between the remibrutinib and placebo arms and were similar to those of the overall pooled population in the REMIX-1/-2 studies,<sup>6</sup> except for the presence of angioedema at baseline (**Table 1**)

Table 1. Patient demographics and baseline characteristics

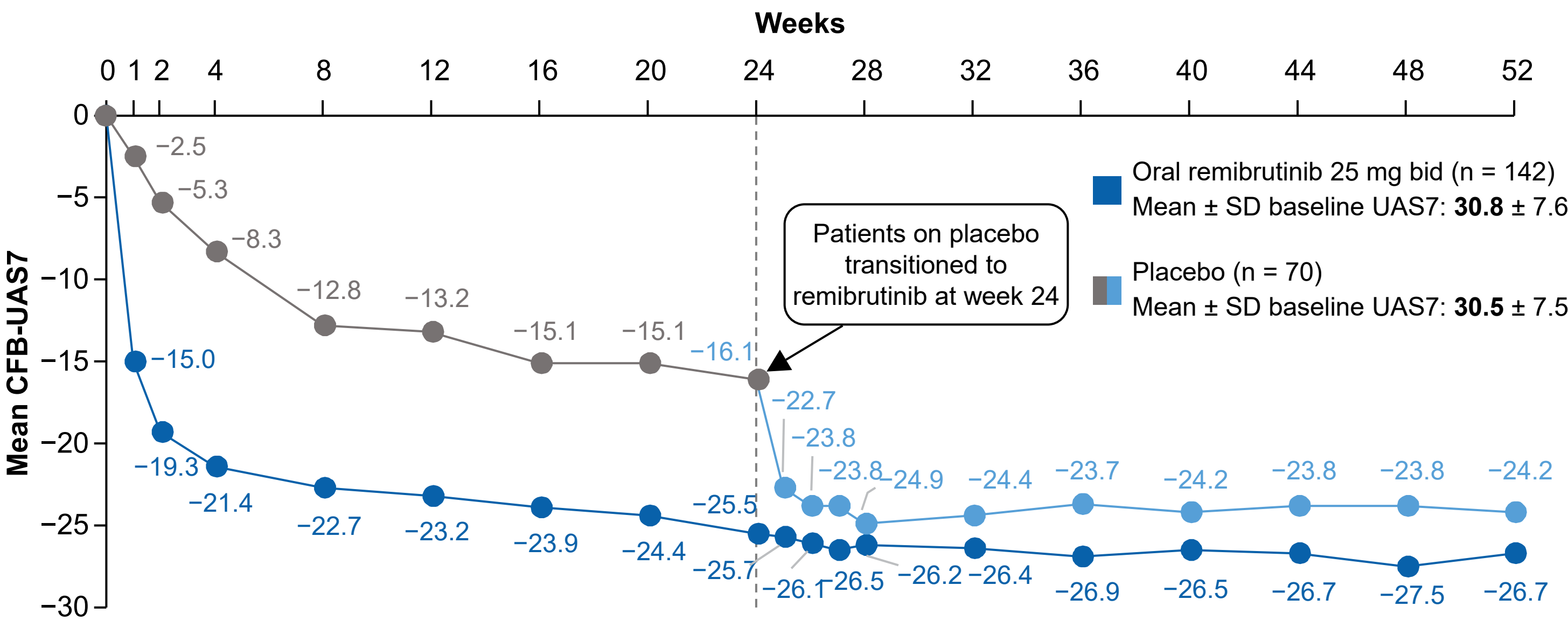
Patient demographics	European region <sup>a</sup>		Overall pooled population	
	Oral remibrutinib 25 mg bid (n = 142) <sup>a</sup>	Placebo (n = 70) <sup>a,b</sup>	Oral remibrutinib 25 mg bid (N = 606)	Placebo (N = 306)
Age, years	44.0 ± 14.0	46.6 ± 16.3	43.3 ± 14.4	43.7 ± 14.1
Female, n (%)	98 (69.0)	47 (67.1)	403 (66.5)	204 (66.7)
BMI, kg/m <sup>2</sup>	27.3 ± 6.0	27.9 ± 6.2	27.4 ± 6.5	27.7 ± 6.3 <sup>c</sup>
CSU duration, years	6.8 ± 8.0	5.4 ± 6.7	6.2 ± 8.6	5.3 ± 6.7
Presence of angioedema, n (%)	103 (72.5)	41 (58.6)	313 (51.7)	135 (44.1)
Baseline disease severity				
UAS7	30.8 ± 7.6	30.5 ± 7.5	30.6 ± 7.8	29.7 ± 7.6
ISS7	14.7 ± 4.2	14.3 ± 4.4	14.6 ± 4.2	14.1 ± 4.0
HSS7	16.1 ± 4.5	16.3 ± 4.5	16.0 ± 4.5	15.6 ± 4.5

Data are presented as mean ± SD unless specified otherwise. <sup>a</sup>This pooled analysis included all 23.4% (142 of 606) of patients from the remibrutinib arm and 22.9% (70 of 306) from the placebo arm of the REMIX-1/-2 studies from the European region. <sup>b</sup>Patients in the placebo group transitioned to remibrutinib at week 24. <sup>c</sup>n = 305. bid, twice daily; BMI, body mass index; CSU, chronic spontaneous urticaria; HSS7, weekly Hives Severity Score; ISS7, weekly Itch Severity Score; SD, standard deviation; UAS7, weekly Urticaria Activity Score.

### Improvement in UAS7

- In the European subpopulation, remibrutinib showed numerically greater improvements versus placebo in CFB-UAS7 at week 1 (mean ± SD: −15.0 ± 10.2 vs −2.5 ± 7.1) and week 12 (−23.2 ± 11.5 vs −13.2 ± 12.4; **Figure 2**)
  - Overall pooled REMIX-1/-2 population: CFB-UAS7 at week 1 (−11.8 ± 9.9 vs −3.6 ± 7.6) and week 12 (−21.3 ± 11.9 vs −13.1 ± 12.1)
- After transitioning from placebo to remibrutinib at week 24, remibrutinib showed improvements in CFB-UAS7 as early as week 25

Figure 2. Mean CFB-UAS7 up to week 52 in European region patients with CSU from the pooled REMIX-1/-2 studies

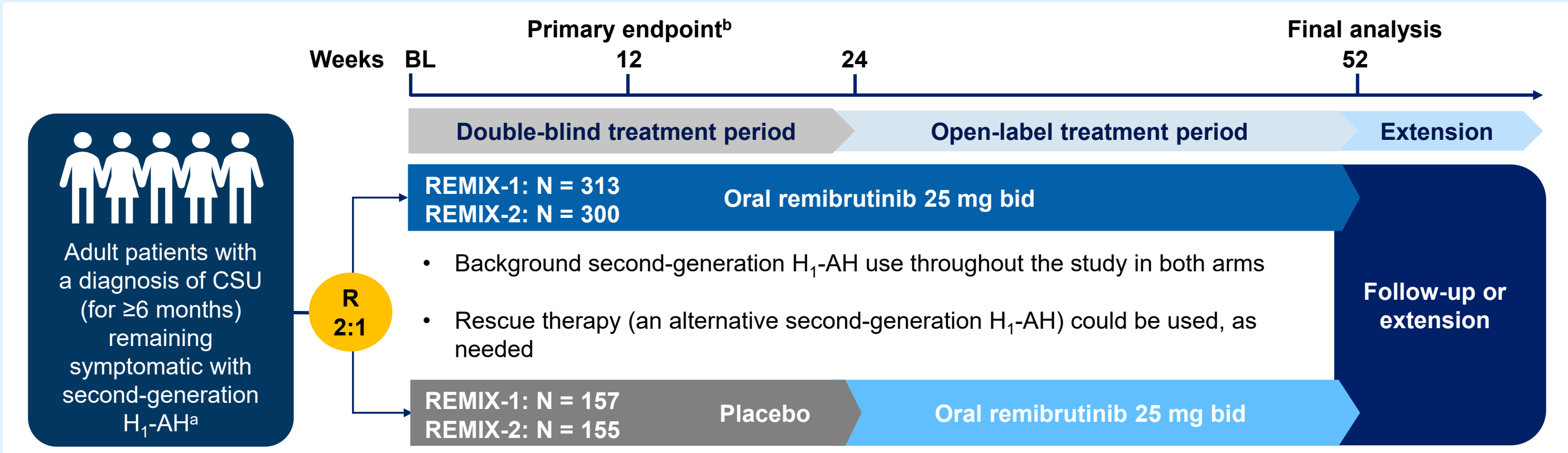


Pooled analysis, full analysis set – observed data. bid, twice daily; CFB, change from baseline; CSU, chronic spontaneous urticaria; n, number of patients from the European region in the pooled REMIX-1/-2 studies; N, total number of patients in the pooled REMIX-1/-2 studies; SD, standard deviation; UAS7, weekly Urticaria Activity Score.

### European Subpopulation From the REMIX-1 and REMIX-2 Studies

- REMIX-1:** Bulgaria, Czech Republic, France, Hungary, Italy, Russian Federation and Spain
- REMIX-2:** Austria, Denmark, Germany, Poland, Russian Federation, Slovakia, Switzerland and United Kingdom

Figure 1. Study design<sup>2,3</sup>



<sup>a</sup>Presence of itch and hives for ≥6 consecutive weeks before screening despite the use of a second-generation H<sub>1</sub>-AH; UAS7 ≥16, ISS7 ≥6 and HSS7 ≥6 during the 7 days before randomisation (day 1). <sup>b</sup>The primary endpoint of the change in UAS7 from baseline to week 12. AH, antihistamines; bid, twice daily; BL, baseline; CSU, chronic spontaneous urticaria; H<sub>1</sub>, histamine 1; HSS7, weekly Hives Severity Score; ISS7, weekly Itch Severity Score; N, number of patients; R, randomisation; UAS7, weekly Urticaria Activity Score.

### Study Assessments and Data Analysis

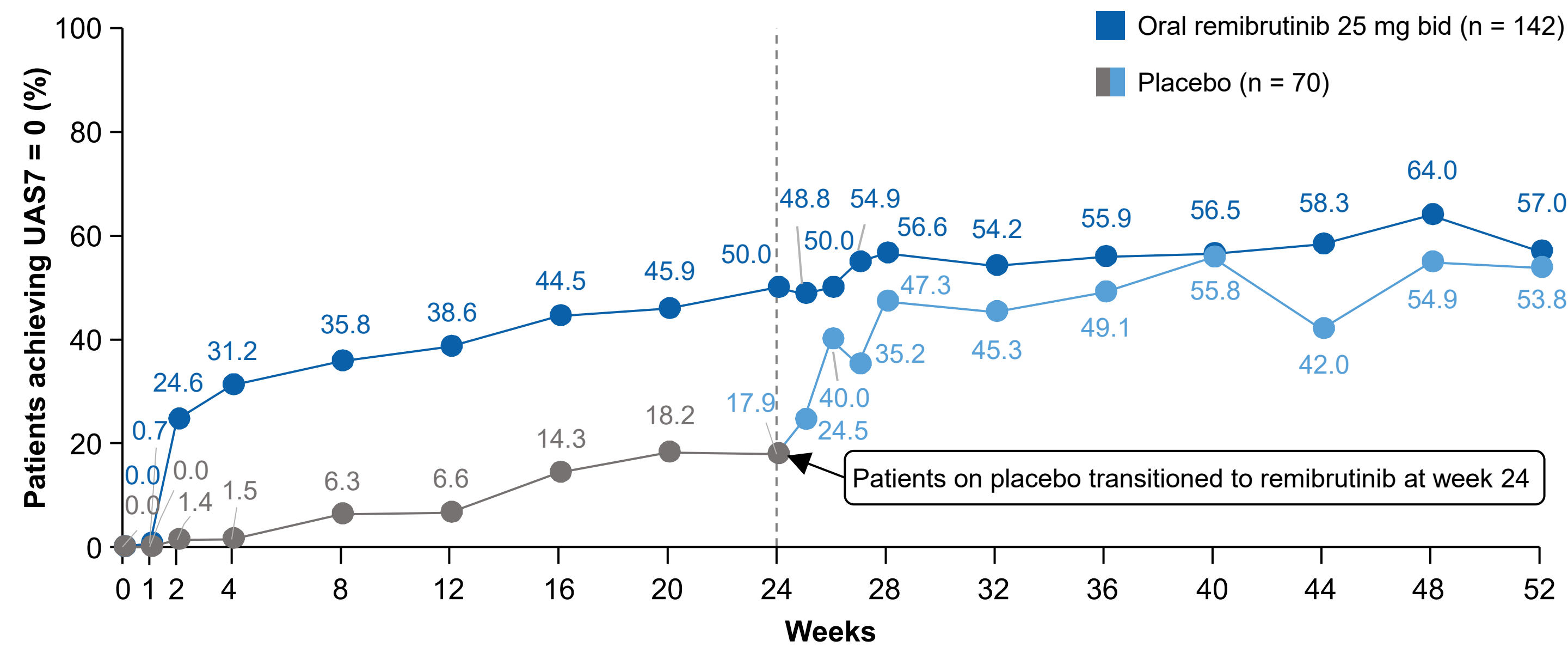
- Outcomes assessed were change from baseline (CFB) in weekly Urticaria Activity Score (CFB-UAS7), proportion of patients achieving UAS7 = 0 (complete control) and UAS7 ≤6 (well-controlled disease) up to week 52
- Data were analysed using summary statistics

### Proportion of Patients Achieving UAS7 = 0 and UAS7 ≤6

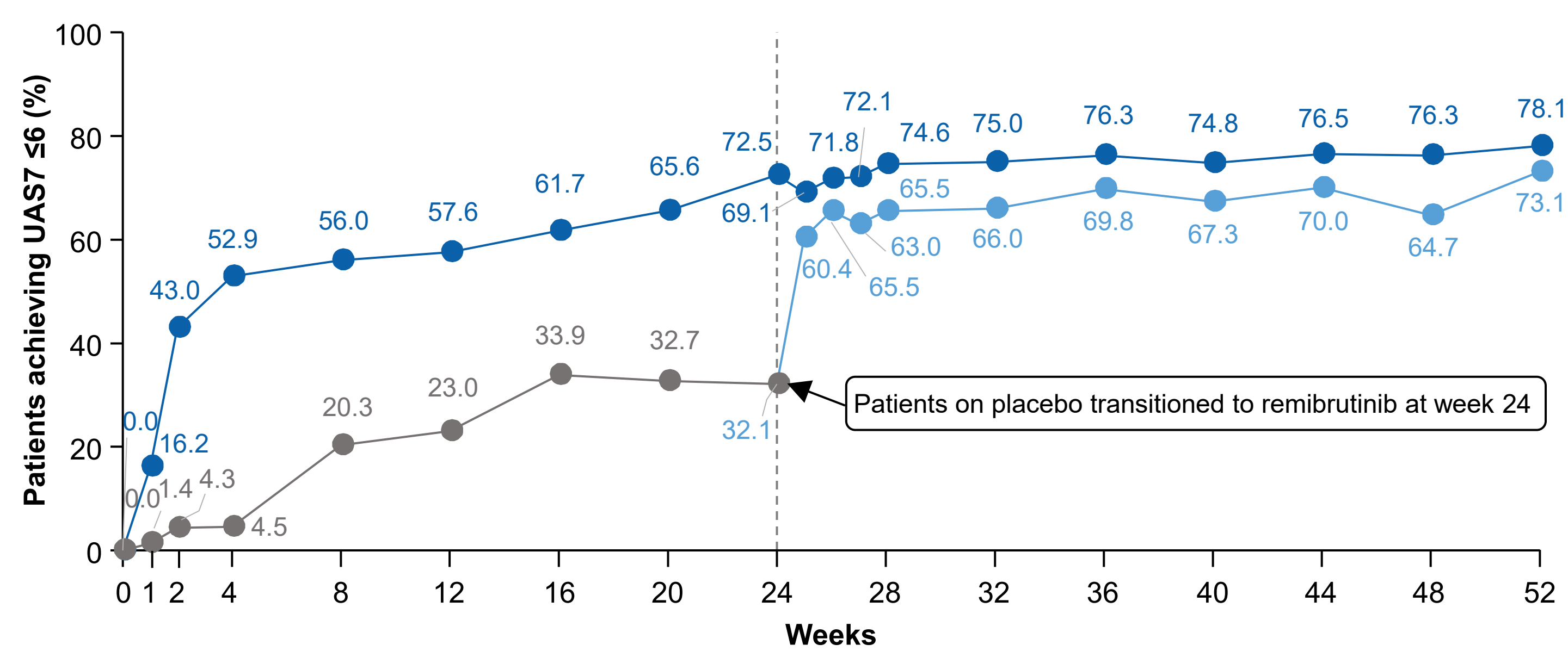
- Overall, the proportion of patients achieving UAS7 = 0 and UAS7 ≤6 was higher in the European population than in the overall pooled REMIX-1/-2 population
  - At week 12 UAS7 = 0: European subpopulation (38.6% vs 6.6%; **Figure 3A**); overall pooled REMIX-1/-2 population (31.6% vs 9.2%)
  - At week 12 UAS7 ≤6: European subpopulation (57.6% vs 23.0%; **Figure 3B**); overall pooled REMIX-1/-2 population (51.3% vs 23.8%)
- After transitioning from placebo to remibrutinib at week 24, the proportion of patients with UAS7 = 0 and UAS7 ≤6 increased as early as week 25 (**Figure 3A and 3B**)

Figure 3. Proportion of patients achieving A) UAS7 = 0 and B) UAS7 ≤6 up to week 52 among European region patients with CSU from the pooled REMIX-1/-2 studies

#### A) UAS7 = 0



#### B) UAS7 ≤6



Pooled analysis, full analysis set – observed data. bid, twice daily; CSU, chronic spontaneous urticaria; N, total number of patients in the pooled REMIX-1/-2 studies; n, number of patients from the European region in the pooled REMIX-1/-2 studies; SD, standard deviation; UAS7, weekly Urticaria Activity Score.

### Overall Safety Profile

- In the pooled safety analysis of the overall population, remibrutinib showed favourable safety and tolerability compared to placebo<sup>2</sup>
- The incidence of at least 1 adverse event (AE) up to week 24 was comparable between the remibrutinib and placebo arms (64.9% and 64.7% of patients, respectively)<sup>2</sup>
- No deaths were reported, and discontinuation of the study treatment due to AEs was infrequent<sup>2</sup>
- No serious AEs were considered related to the study medication by the investigator<sup>2</sup>

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## Disclosures

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