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Effect of remibrutinib on sleep and daily activities in patients with chronic spontaneous urticaria: Results from the phase 3 studies

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*Prof. Maurer sadly passed away during the development of this abstract. His invaluable contribution to this study is honoured with his recognition as a co-author in memoria

KEY FINDINGS & CONCLUSIONS

- In the pivotal REMIX studies, remibrutinib 25 mg bid reduced the impact of CSU on sleep and daily activities versus placebo, which was observed as early as week 1 and improved up to week 24
- Treatment with remibrutinib led to early achievement of SIS7=0 (no impact on sleep) and AIS7=0 (no impact on daily activities) in a greater proportion of patients versus placebo, which further improved through week 24
- Remibrutinib has the potential to be an effective oral treatment option that may improve sleep and daily activities in patients with CSU

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INTRODUCTION

- Chronic spontaneous urticaria (CSU) is characterised by itchy wheals (hives) and/or angioedema (for at least 6 weeks) and has a major impact on patients' well-being[1]
- CSU causes substantial sleep interference, which occurs almost twice as frequently as that seen in individuals without CSU[2]
- Reduction in urticaria disease activity helps alleviate sleep and daily activity interference[3]
- Remibrutinib, a novel, highly selective, oral, Bruton's tyrosine kinase inhibitor, has previously shown superior efficacy versus placebo at week 12 and a favourable safety profile in the 24-week double-blind period of the pivotal phase 3 REMIX-1 and REMIX-2 studies in patients with CSU who remain symptomatic despite treatment with second-generation H1-antihistamines (sgH1-AHs)[4]

OBJECTIVE

- To assess the effect of remibrutinib on sleep and daily activities in patients with CSU up to week 24 of the phase 3 REMIX-1 and REMIX-2 studies

METHODS

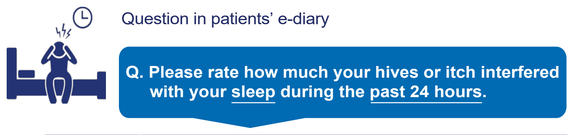
Study design

- REMIX-1 and REMIX-2 are two identical, global, double-blind, placebo-controlled phase 3 studies of remibrutinib 25 mg bid (twice daily). Adult patients with CSU who remain symptomatic despite treatment with sgH1-AHs were randomised 2:1 to oral remibrutinib 25 mg bid or placebo for 24 weeks, followed by an open-label treatment with remibrutinib 25 mg bid for 28 weeks (patients on placebo transitioned to remibrutinib at week 24)

Study assessments and data analysis

- Exploratory outcomes included change from baseline (CFB) in weekly Sleep Interference Score (SIS7) and weekly Activity Interference Score (AIS7). The proportion of patients who had no impact of CSU on sleep (SIS7=0) and daily activity (AIS7=0) over time was assessed (**Figure 1**) Data were analysed using summary statistics
- Daily sleep interference and daily activity interference were scored on a scale of 0–3
- Weekly scores, namely SIS7, and AIS7 ranged from 0–21, where lower scores indicate lower impact on sleep or activity

Figure 1. Scoring methodology for sleep and daily activities in patients with CSU



Scoring	Effect on patients' sleep
0	No interference
1	**Mild,** little interference with sleep
2	**Moderate,** awoke occasionally, some interference with sleep
3	Substantial, woke up often, **severe** interference with sleep

Scoring	Effect on patients' daily activities
0	No interference
1	**Mild,** little interference with daily activities
2	**Moderate,** some interference with daily activities
3	Substantial, **severe** interference with daily activities

CSU, chronic spontaneous urticaria.

RESULTS

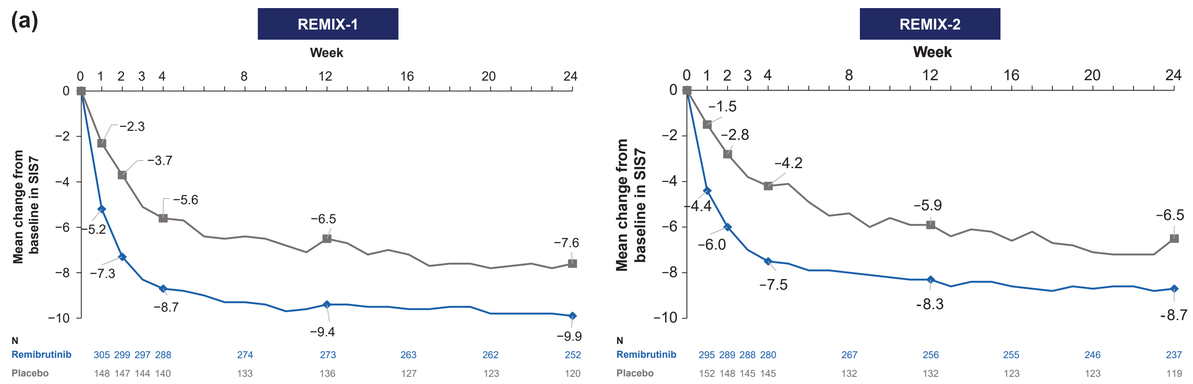
- A total of 470 patients (remibrutinib 25 mg bid, n=313; placebo, n=157) and 455 patients (remibrutinib 25 mg, bid n=300; placebo, n=155) were randomised in REMIX-1 and REMIX -2, respectively
- Patient demographics and baseline disease characteristics were well balanced between the remibrutinib and placebo arms in both REMIX studies (**Table 1**)

Table 1. Patient demographics and baseline characteristics

This table has been published in the New England Journal of Medicine.
It can be found by clicking here: Metz M, et al. N Engl J Med. 2025;392(10):984-94).

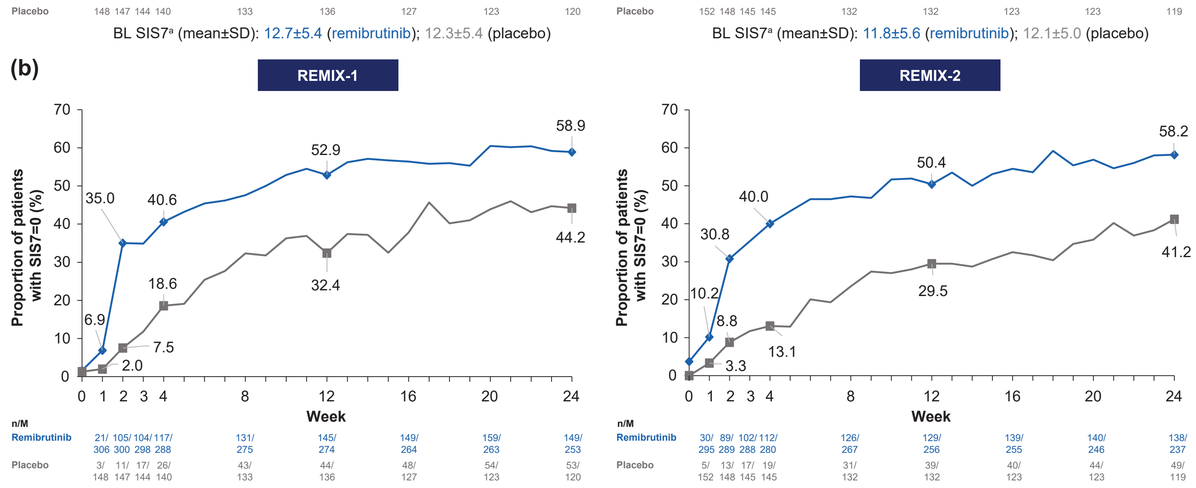
- Remibrutinib reduced the impact of CSU on sleep (CFB-SIS7), observed as early as week 1, with continued improvements up to week 24 (**Figure 2a**). A greater proportion of patients on remibrutinib versus placebo experienced undisturbed sleep (SIS7=0) through to week 24 (**Figure 2b**)

Figure 2. Impact of remibrutinib on (a) sleep (CFB in SIS7) and (b) undisturbed sleep (SIS7=0) in patients with CSU (full analysis set; observed data)



BL SIS7[a] (mean±SD): 12.7±5.4 (remibrutinib); 12.3±5.4 (placebo)

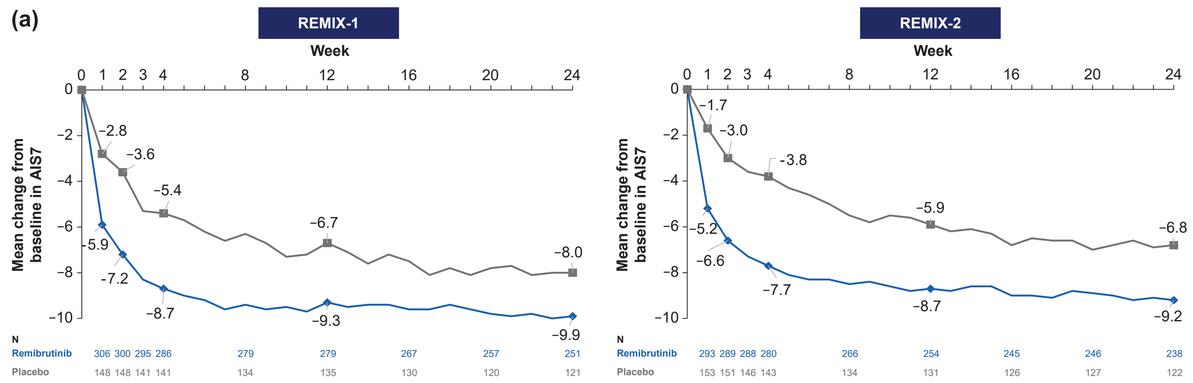
BL SIS7[a] (mean±SD): 11.8±5.6 (remibrutinib); 12.1±5.0 (placebo)



bid, twice daily; BL, baseline; CFB, change from baseline; CSU, chronic spontaneous urticaria; M, total number of subjects in the treatment group with response variable defined; n, number of subjects who responded; N, number of patients in each treatment arm; SD, standard deviation; SIS7, weekly Sleep Interference Score.

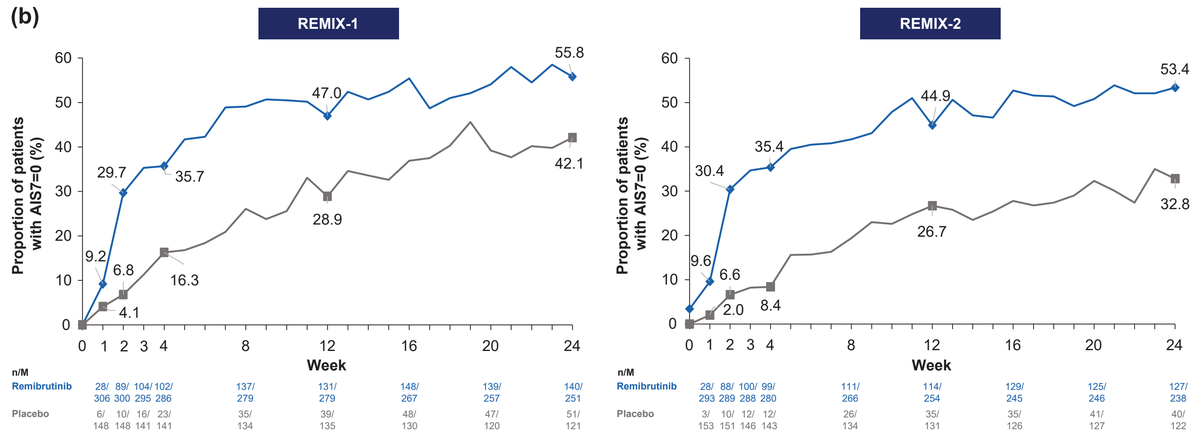
- Remibrutinib reduced the impact of CSU on daily activities (CFB-AIS7), observed as early as week 1, with continued improvements up to week 24 (**Figure 3a**). Greater proportion of patients on remibrutinib vs placebo achieved no impact of CSU on daily activities (AIS7=0; **Figure 3b**)

Figure 3. Impact of remibrutinib on (a) daily activities (CFB in AIS7) and (b) no interference on daily activities (AIS7=0) in patients with CSU (full analysis set; observed data)



BL AIS7[a] (mean±SD): 13.1±4.9 (remibrutinib); 13.0±4.8 (placebo)

BL AIS7[a] (mean±SD): 12.5±5.3 (remibrutinib); 12.3±4.8 (placebo)



AIS7, weekly Activity Interference Score; bid, twice daily; BL, baseline; CSU, chronic spontaneous urticaria; M, total number of subjects in the treatment group with response variable defined; n, number of subjects who responded; N, number of patients in each treatment arm; SD, standard deviation.

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