Sustained scalp, eyebrow, and eyelash hair regrowth with ritlecitinib through Week 48 in patients with alopecia areata: post hoc analysis of the ALLEGRO phase 2b/3 study

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BACKGROUND

- Alopecia areata (AA) is an autoimmune disease that has an underlying immuno-inflammatory pathogenesis and is characterized by nonscarring hair loss ranging from small patches to complete scalp, face, and/or body hair loss[1]
- Ritlecitinib, an oral JAK3/TEC family kinase inhibitor, demonstrated efficacy and safety in patients aged ≥12 years with AA and ≥50% scalp hair loss in the ALLEGRO phase 2b/3 trial (NCT03732807)[2]
  - Significant improvements in the proportion of patients with Severity of Alopecia Tool (SALT) score ≤20 (≤20% of scalp without hair) at Week 24 (primary endpoint) were observed in the 50 mg and 30 mg ritlecitinib treatment groups (± 200 mg loading dose) vs placebo

OBJECTIVE

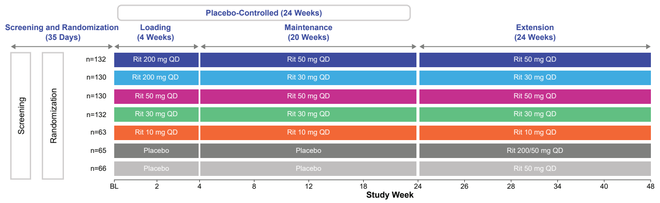
- This post hoc analysis evaluated sustained scalp, eyebrow, and eyelash hair regrowth over 48 weeks in ritlecitinib-treated patients who had a clinical response at Week 24

METHODS

Study design

- The ALLEGRO phase 2b/3 trial was an international, randomized, double-blind, placebo-controlled, combined dose-ranging and pivotal study (**Figure 1**)

Figure 1. ALLEGRO-2b/3 Study Design



BL, baseline; QD, once daily; Rit, ritlecitinib. No other therapies for AA were allowed during the study.

Study population

- Inclusion criteria included:
  - Age ≥12 years
  - AA with ≥50% scalp hair loss, including patients with alopecia totalis and alopecia universalis
  - Current AA episode duration of 6 months to 10 years
- Patients with other causes of alopecia or previous use of any JAK inhibitor were excluded
- This analysis included patients who received ritlecitinib 200/50, 200/30, 50, or 30 mg and had a clinical response at Week 24, based on:
  - SALT score ≤20, or
  - SALT score ≤10, or
  - Eyebrow (EBA) response defined as ≥2-grade improvement or a normal EBA scores at Week 24, in patients with abnormal EBA scores at baseline, or
  - Eyelash (ELA) response, defined similarly using ELA scores
    - EBA and ELA are 4-point scales ranging from 0 (none, or no eyebrows/eyelashes) to 3 (normal eyebrows/eyelashes)

Outcome measures

- The proportions of ritlecitinib-treated patients with clinical response at Week 24, who sustained this response through Week 48, were assessed in this post-hoc analysis
- For each endpoint (SALT score ≤20, SALT score ≤10, EBA, or ELA score) sustained response required:
  - Response at Week 24 and Week 48, and
  - No loss of response at any time point (Weeks 28, 34, or 40)
- Patients with missing data at Week 24 or Week 48 were excluded from this analysis

Statistical analysis

- Descriptive analyses were used to evaluate the proportion of ritlecitinib-treated patients with a clinical response at Week 24, who sustained this response through Week 48
- 95% CIs were calculated based on normal approximation

RESULTS

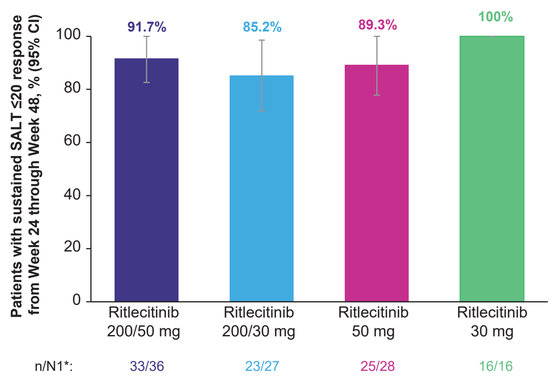
Table 1. Baseline characteristics of patients with SALT score ≤20 response at Week 24

	Ritlecitinib QD			
	200/50 mg (n=38)	200/30 mg (n=27)	50 mg (n=29)	30 mg (n=17)
Age				
Mean (SD), years	33.7 (14.2)	31.8 (12.2)	34.0 (14.5)	36.9 (14.7)
12-17 years, n (%)	5 (13.2)	3 (11.1)	4 (13.8)	3 (17.6)
≥18 years, n (%)	33 (86.8)	24 (88.9)	25 (86.2)	14 (82.4)
Female, n (%)	28 (73.7)	21 (77.8)	25 (86.2)	11 (64.7)
White, n (%)	25 (65.8)	16 (59.3)	18 (62.1)	12 (70.6)
Patients with AT/AU*, n (%)	8 (21.1)	7 (25.9)	4 (13.8)	4 (23.5)
Baseline SALT score, mean (SD)†	84.4 (16.0)	80.9 (18.2)	78.9 (16.9)	77.6 (19.2)
Duration of disease since AA diagnosis, mean (SD), years	9.9 (8.5)	9.2 (8.0)	7.1 (8.9)	6.9 (5.9)
Duration of current AA episode, mean (SD), years	2.5 (2.2)	3.1 (2.4)	2.4 (2.5)	2.1 (2.6)

AA, alopecia areata; AT, alopecia totalis; AU, alopecia universalis; QD, once daily; SALT, Severity of Alopecia Tool.
*Patients in the AT/AU category had a SALT score of 100 at baseline (regardless of the category in the AA history case report form).
†Mean (SD) baseline SALT score for all patients including patients with AT/AU.

- In the 200/50, 200/30, 50, 30 mg ritlecitinib treatment groups, 36/132, 27/130, 28/130, and 16/132 patients, respectively, had a SALT score ≤20 response at Week 24 and had SALT data at Week 48
  - Of these, 85% to 100% had a sustained response through Week 48 (**Figure 2**)

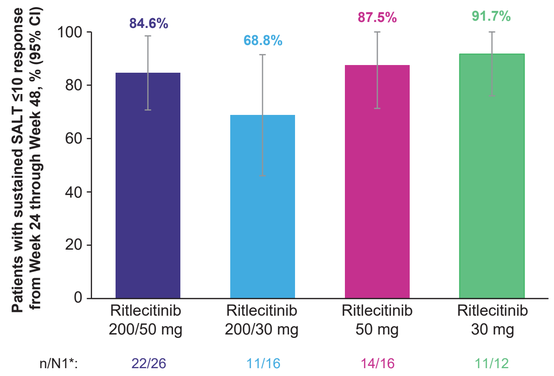
Figure 2. Sustained response based on SALT score ≤20



SALT, Severity of Alopecia Tool.
*n/N1 indicated for each timepoint; n: number of patients with sustained response. N1: number of patients with response at Week 24.

- Similarly, 26/132, 16/130, 16/130, and 12/132 patients in the 200/50, 200/30, 50, 30 mg groups, respectively, had a SALT score ≤10 response at Week 24 and had SALT data at Week 48
  - Of these, 69% to 92% had a sustained response through Week 48 (**Figure 3**)

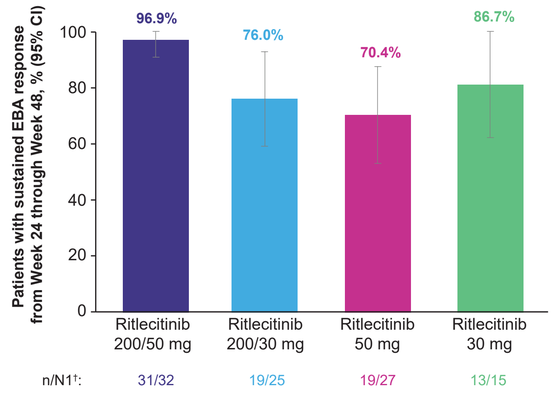
Figure 3. Sustained response based on SALT score ≤10



SALT, Severity of Alopecia Tool.
*n/N1 indicated for each timepoint; n: number of patients with sustained response. N1: number of patients with response at Week 24.

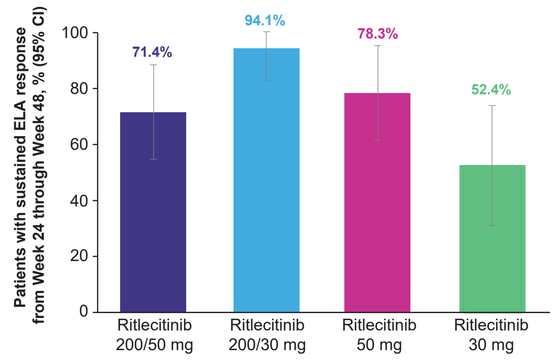
- The majority of EBA and ELA responders at Week 24 sustained this response through Week 48 (**Figures 4 and 5**)

Figure 4. Sustained response based on EBA score*



EBA, eyebrow assessment.
*EBA response defined as a normal score (3) or ≥2-grade improvement from baseline in the EBA scale in patients with abnormal normal EBA scores at baseline.
†n/N1 indicated for each timepoint; n: number of patients with sustained response. N1: number of patients with response at Week 24.

Figure 5. Sustained response based on ELA score*



ELA, eyelash assessment.
*ELA response defined as a normal score (3) or ≥2-grade improvement from baseline in the ELA scale in patients with abnormal normal ELA scores at baseline.
†n/N1 indicated for each timepoint; n: number of patients with sustained response. N1: number of patients with response at Week 24.

Safety

- Ritlecitinib was well tolerated through Week 48 in patients ≥12 years with AA
- As in the overall population, across all responder populations, the most common AEs occurring in ≥5% of patients in any treatment group were headache, upper respiratory tract infection, nasopharyngitis, and urticaria

CONCLUSIONS

- In this post hoc analysis, sustained hair regrowth response was achieved with continued ritlecitinib treatment through Week 48 in the majority of patients with AA who had a clinical response based on scalp, eyebrow, or eyelash regrowth at Week 24
- Additional trials are required to assess longer-term sustained hair regrowth in patients receiving ritlecitinib, as some patients may need >24 weeks to reach a clinical response

REFERENCES

1. Islam N, et al. *Autoimmun Rev*. 2015;14:81-89.
2. King B, et al. *Lancet*. 2023;401:1518-1529.

DISCLOSURES

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