Bempikibart, a novel IL-7Rα antibody, produces hair regrowth that persists off treatment in severe and very severe alopecia areata: efficacy and biomarker results from the Phase 2a SIGNAL-AA Part B trial

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Disclosures

- **Presenter disclosures:** AM has been a consultant and received honoraria from hims and hers, AbbVie, Sun Pharma, Pfizer, Lilly, Boehringer Ingelheim, Indomo, Olaplex, Legacy Healthcare, and Pelage, Soterios, Matchpoint Therapeutics, Dren Labs, LEO Pharma and Q32 Bio.
- **Investigational product:** Bempikibart is investigational and not approved for any indication; efficacy and safety have not been established
- **Data:** ongoing, open-label study; data cut-off 25 September 2026; non-final data subject to change

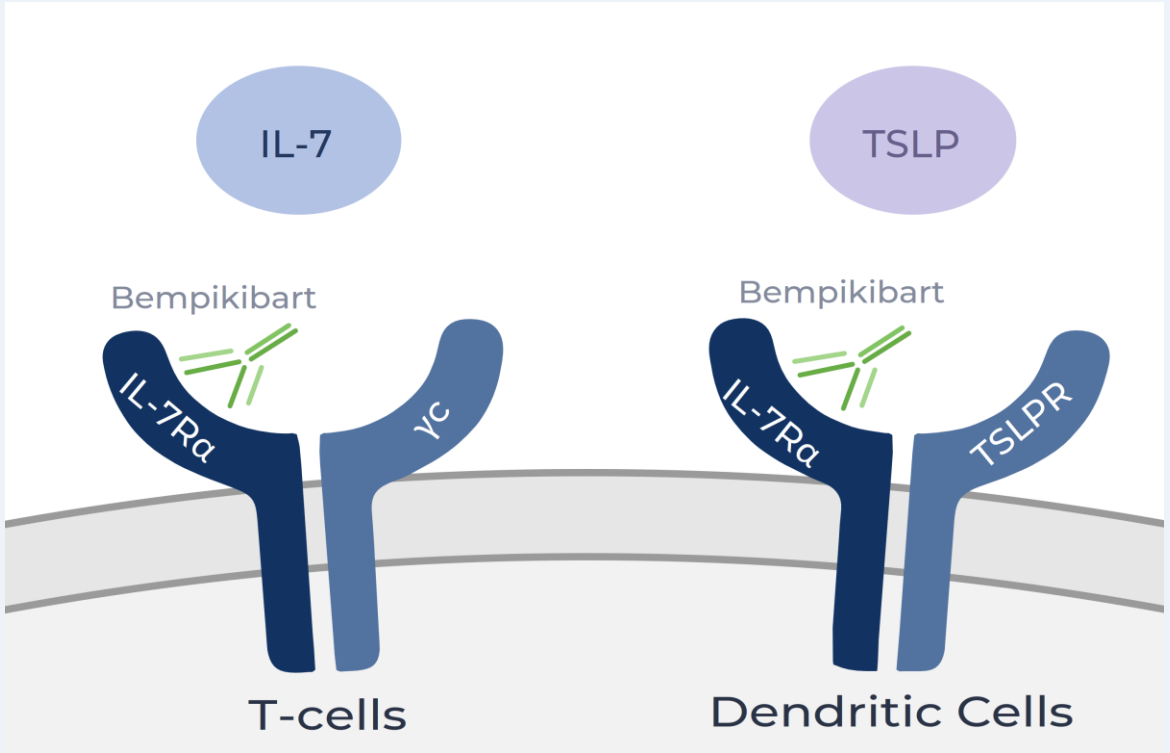
Alopecia Areata and the Rationale for IL-7Rα Blockade with Bempikibart

Alopecia areata

- T-cell–mediated autoimmune disease of the hair follicle
- Approved oral JAK inhibitors require continuous administration; relapse commonly observed after discontinuation
- Unmet need: Safe, convenient therapeutic that provides durable hair regrowth

Bempikibart

- Fully human monoclonal antibody against IL-7Rα that potently blocks IL-7 and TSLP signaling without effector function
- Targets pathogenic effector/memory T cells (IL-7) and type 2 inflammation (TSLP)
- Prior efficacy and safety demonstrated in Signal AA Part A



SIGNAL-AA Part B: Design Optimizes Dosing Paradigm and Assesses Treatment Durability

Key Changes
from Part A

- Loading dose regimen
- Longer duration of treatment (36 Weeks from 24 Weeks)
- Maximum duration of current episode of 4 years
- Central confirmation of diagnosis

Screening with Central Eligibility Review

Treatment Period	Off-Drug Period	OLE
Bempikibart 200mg (n= 33)	Efficacy & Safety Follow-up	Longer-term Dosing
Loading Regimen: 200 mg weekly (4 doses) / Continued Dosing: 200 mg Q2W (32 weeks)	Follow-Up 16 Weeks	Post Week 52

Week 0 — Week 36 — Week 52 →

Design Elements

Key Inclusion/Exclusion Criteria

- Severe/Very Severe Alopecia Areata (SALT 50-100)
- No other forms of Alopecia
- Duration of current episode ≤4 years
- **Prior use of JAKi's allowed** with appropriate wash-out

Primary and Other Key Endpoints

- Primary Analysis: mITT mean percent change from baseline SALT at Week 36
- Other Key Endpoints: percentage of patients achieving relative and absolute SALT score improvements at Week 36

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Note: JAKs = Janus Kinase inhibitors

Week 36 Data Demonstrate Robust Efficacy Across Different Disease Characteristics

PK Loading regimen: Accelerated steady state levels (Week 3) with 3-fold higher mean trough (28.8 µg/mL) at Day 22

Efficacy at Week 36

35.3%

mean SALT improvement from baseline (mITT)

40.0%

SALT≤20, mITT (10/25)

30.3%

SALT≤20, ITT (10/33)

SALT≤20 responses occurred across the enrolled population

In both severe and very severe disease · in IgE-high and IgE-low patients · and in JAK inhibitor-experienced patients

mITT excludes 8 patients per prespecified SAP rules. LOCF for missing values.

Bempikibart Was Well Tolerated with a Favorable Safety Profile

33	0	4%	36
Patients Enrolled	**Severe AEs**	**Injection reactions**	**Weeks on Treatment**
Part B, 52 weeks	No life-threatening events	Of total injections, all mild	Through End of Treatment

Key Safety Findings

- Safety profile consistent with Part A results (Placebo controlled)
- No severe or life-threatening treatment-emergent AEs
- Most adverse events were mild, self-limiting, and resolved without intervention
- No discontinuations due to safety events
- Majority of events resolved ≤ 7 days
- Lymphocyte changes consistent with on-target mechanism; no correlation with infection risk
    - ~40% decrease in absolute lymphocyte count that stabilized Wk 25-28

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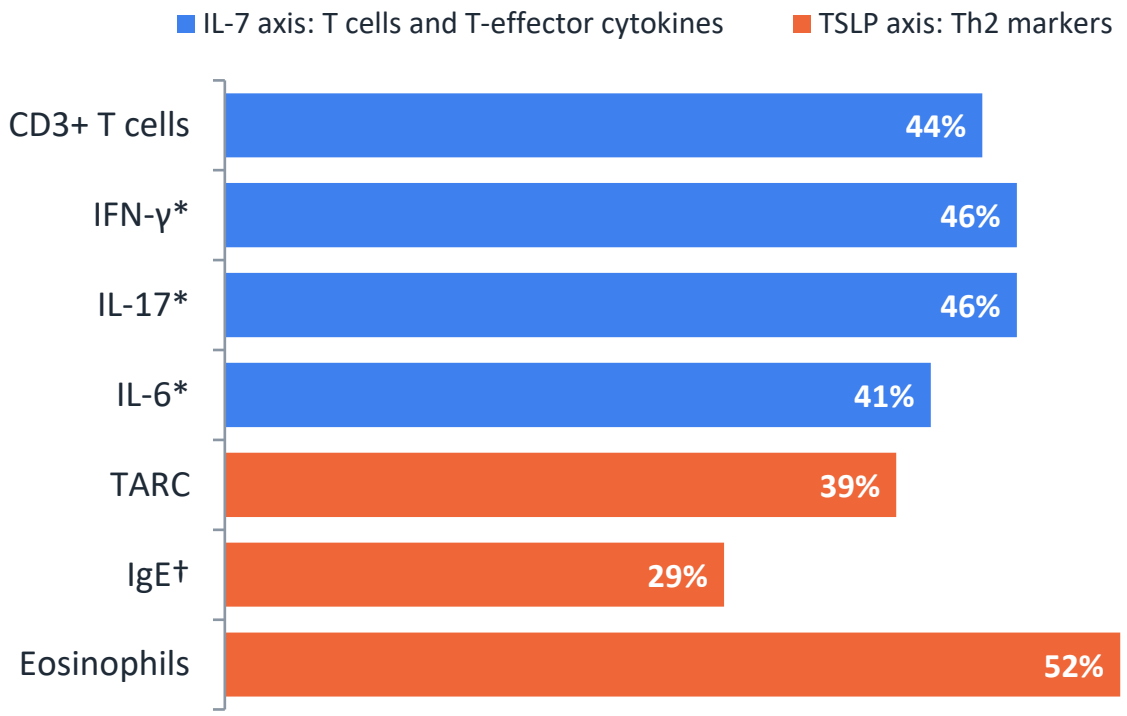
On-Target Biomarker Reductions Across IL-7 and TSLP Axes Supports Dual Mechanism CXCL10 Shift Tracks Clinical Response to Bempikibart

On-target reductions in circulating biomarkers

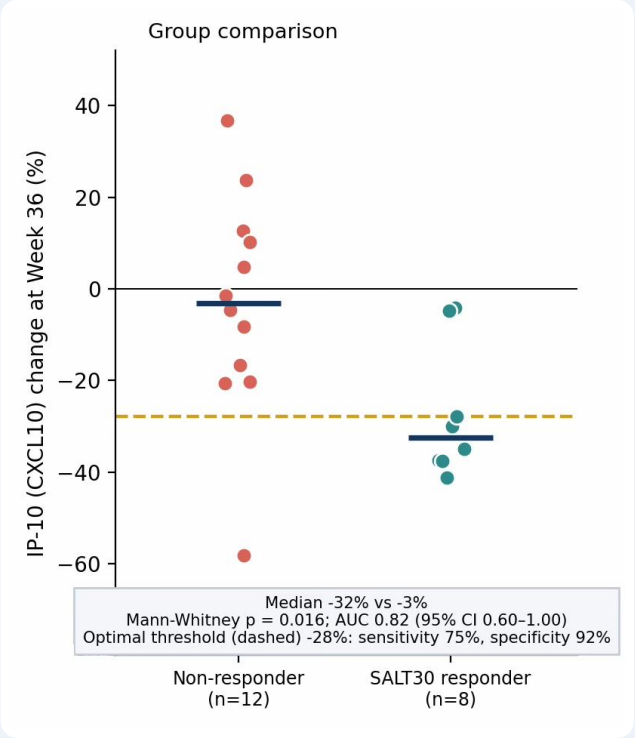
Median % reduction from baseline



Largest median reduction through Week 36. CD3+ T cells, n=21,TARC n=25, EOS n=26.
**Upper baseline tier (n=10 of 25 biomarker-evaluable). †Baseline IgE >200 IU/mL (n=7). .*

Responder biomarker downstream of IFNγ: CXCL10

Change from baseline at Week 36



−32%
Responders (≥SALT30), n=8

−3%
Non-responders, n=12

- Statistically significant p=0.016 (Mann–Whitney)

Exploratory; mITT patients with paired Week 36 data (n=20); responder = ≥30% SALT improvement from Day 1; dashed line = optimal threshold (−28%); not adjusted for multiplicity.

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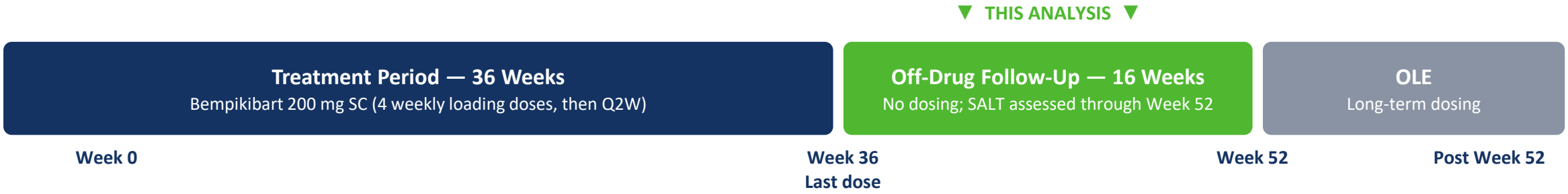
Off-Treatment Efficacy Analysis: Assessing the Durability Potential of Bempikibart



- **18 of 25 mITT patients** (20 of 33 ITT patients) entered into off-drug period
- **12 of these 18 were responders** with ≥10-point SALT improvement by Week 36

Why does assessing the 16-week off-drug period matter?

- **Understand response durability and potential for continued hair regrowth**
- **Support potential for less frequent, chronic maintenance dosing**

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Off-Treatment Durability: Robust Efficacy Maintained Through 16 Week Off-drug Period

▼ THIS ANALYSIS ▼

Treatment Period — 36 Weeks Bempikibart 200 mg SC (4 weekly loading doses, then Q2W)	Off-Drug Follow-Up — 16 Weeks No dosing; SALT assessed through Week 52	OLE Long-term dosing

Week 0 — Week 36 Last dose — Week 52 — Post Week 52

	Final on-treatment visit (Week 36)		16 weeks off-drug period
	Final mITT	mITT entering off-drug period	
n	25	18	**18**
Mean Change Absolute SALT Score	35.3%	45%	**47%**
SALT ≤20 (%)	40%	50%	**44%**
$SALT_{30}$ (%)	44%	56%	**61%**
$SALT_{50}$ (%)	44%	56%	**50%**

LOCF for missing values.

One patient reached SALT 0 and two patients further deepened reaching SALT ≤ 10 during the off-drug period; one latent responder converted to SALT≤20 in off-drug period

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Off-Treatment Durability: Week 36 Responders Maintained or Deepened Hair Growth

▼ THIS ANALYSIS ▼

Treatment Period — 36 Weeks Bempikibart 200 mg SC (4 weekly loading doses, then Q2W)	Off-Drug Follow-Up — 16 Weeks No dosing; SALT assessed through Week 52	OLE Long-term dosing

Week 0 — Week 36 Last dose — Week 52 — Post Week 52

	Final on-treatment visit (Week 36)	Through 8 weeks off-drug	Through 16 weeks off-drug
n	12	**12**	**12**
Mean Absolute SALT Score	22.5	**22.9**	**25.4**
Maintained Response[1], n (%)	—	**12 (100%)**	**12 (100%)**
Deepening of Response[2], n (%)	—	**6 (50%)**	**5 (42%)**

[1] Maintained response = < 20-point SALT worsening from the last on-treatment value — the same criterion used in BRAVE-AA1 (King et al. JAMA Dermatol. 2024);

[2] Deepened response = any SALT improvement from that value; LOCF for missing values.

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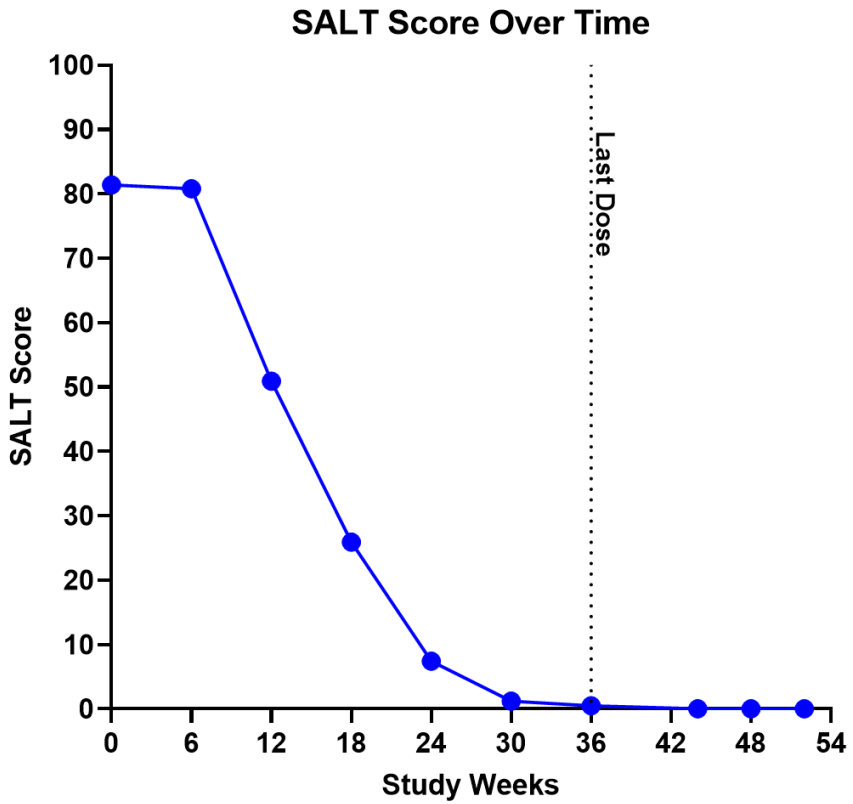
Patient with Severe AA with Robust Response and Durability Off-Drug: SALT≤10 at Week 24 and 36, SALT-0 at Week 44; Maintained Off-Drug

Treatment Period

Baseline

Week 36

- 48-year-old female; Duration of current episode: 1.2 years



16 Weeks Off-Drug

Week 52

SALT≤10 at Week 36 which improved to SALT 0 at Week 44; maintained through Week 52 and enrolled in OLE

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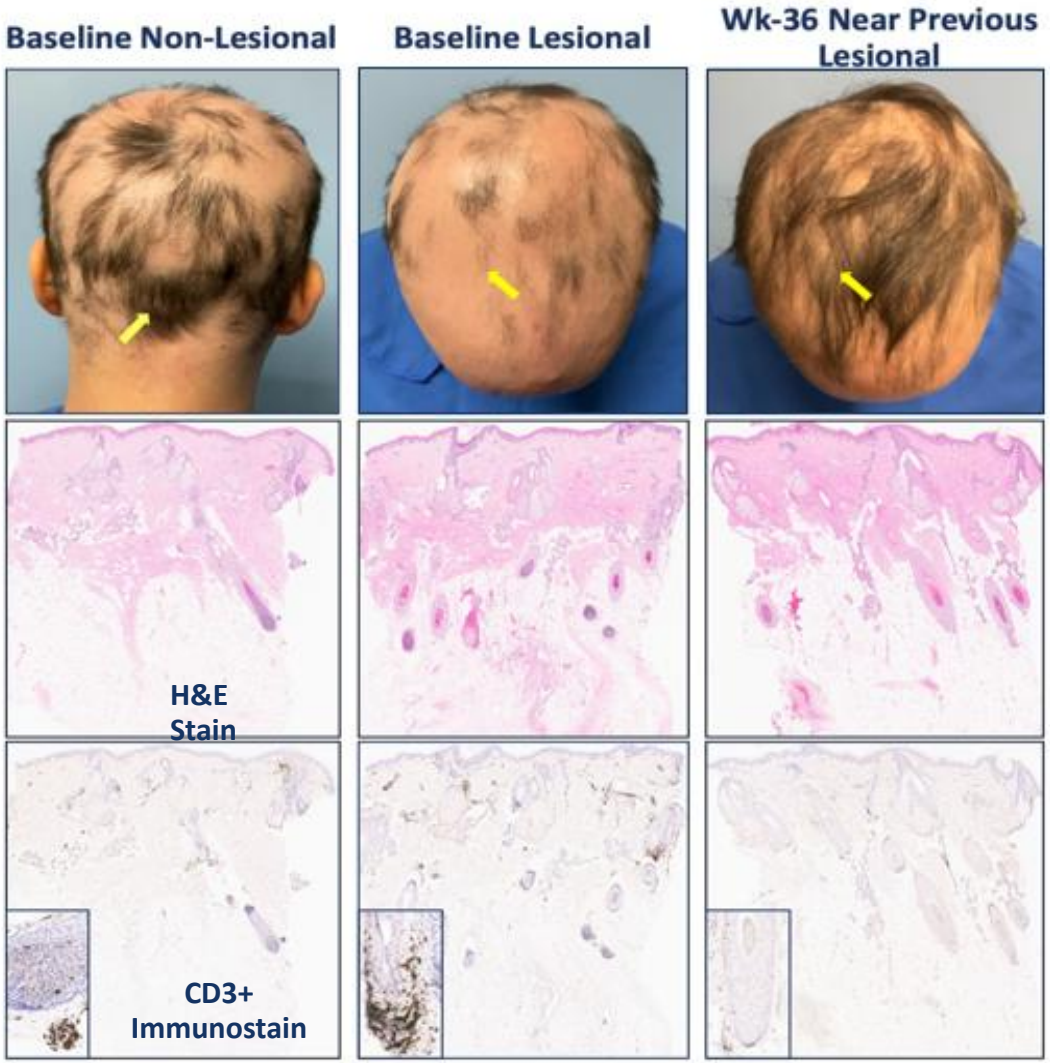
Note: AA = Alopecia Areata

Scalp Biopsy on Treatment: Marked Reduction in T-Cell Infiltrates in Hair Follicles at Week 36, Concordant With Regrowth



Clinical Background

- 39 year old Female
- Duration of current episode – 11 months

Key Findings

Baseline:

- Lesional biopsy shows **predominance of telogen/catagen** hair follicles and **CD3+/CD8+ T-cell** infiltrates

Week 36 biopsies:

- Wk 36 lesional biopsy shows:
  - **Marked increase in anagen follicles** with follicular architecture that is nearly indistinguishable from that of non-lesional biopsy
  - **Reduction of perifollicular CD3+/CD8+ T-cells**

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Bempikibart Signal AA Part B Summary

- Responses in both severe and very severe disease, including JAKi-experienced patients
- Favorable safety & tolerability
- Response maintained or deepened across off-drug population
- Biomarker reductions across IL-7 and TSLP axes
  - On-target CXCL10 reduction tracked clinical response
- Biopsies: reduced perifollicular T cells and increase in anagen

Conclusions

- Novel biologic demonstrating robust safety and efficacy with potential for first-line use
- Biomarker data consistent with anticipated mechanism of IL7/TSLP targeting
- Maintenance dose predicted to be Monthly-Quarterly; currently being assessed in OLE
- Plans to initiate Phase 3 pivotal trial in first half of 2027

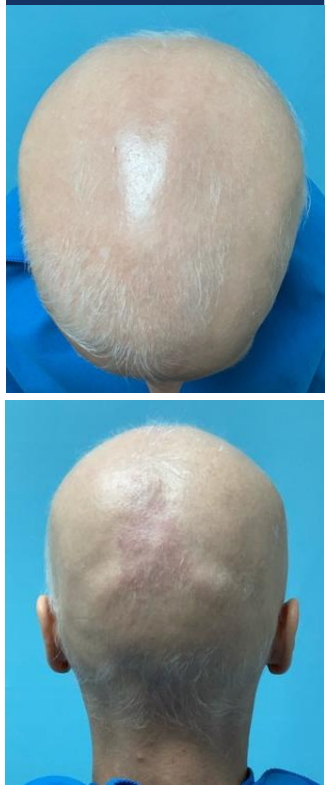
Appendix Figures

Case Study: Initial Non-Responder Achieved SALT≤20 at 16 Weeks Following Final Dose

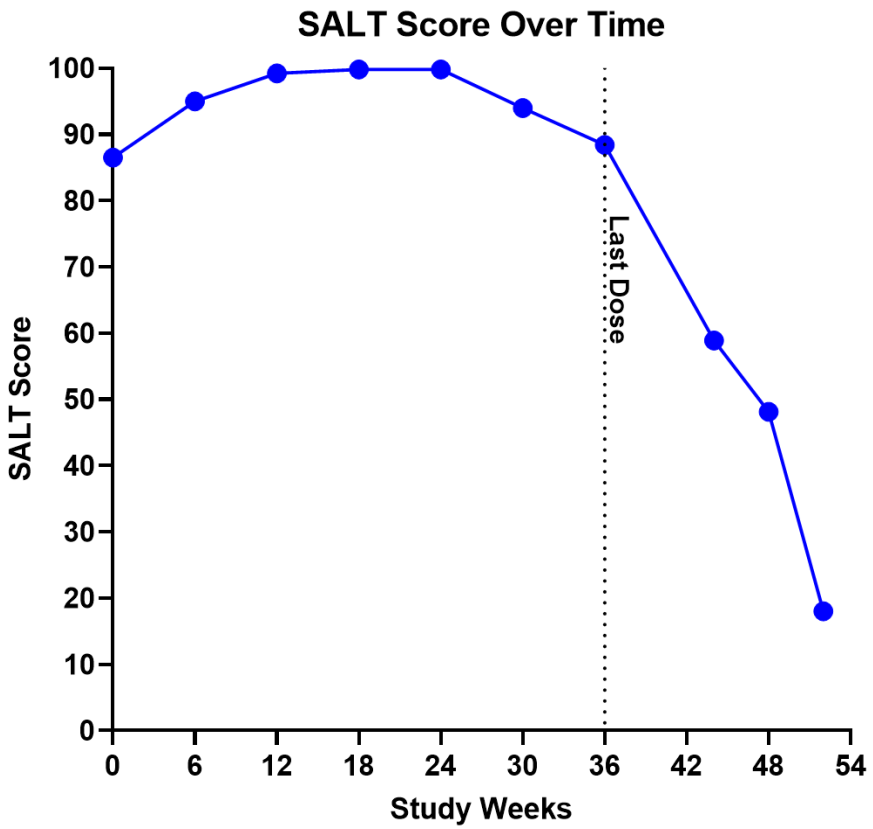
Treatment Period

Baseline

Week 36



- 46-year-old female; Duration of current episode: 7 months



16 Weeks Off-Drug

Week 52

Early Signs of Hair regrowth at Week 36, with SALT≤20 response by Week 52, Patient enrolled into OLE

Note: AA = Alopecia Areata