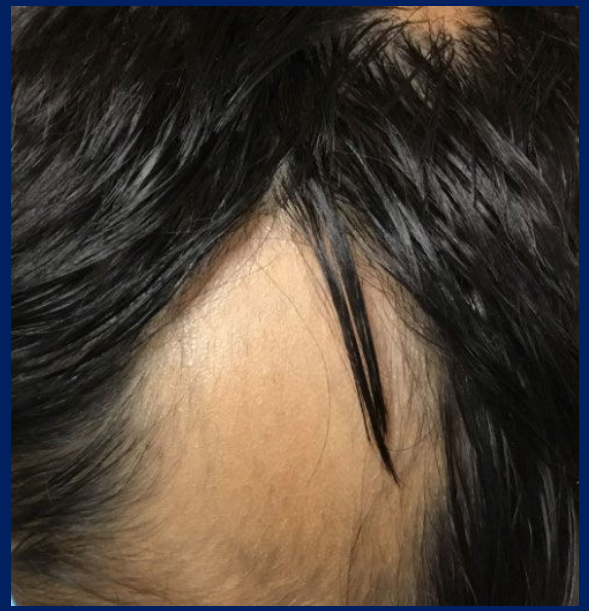
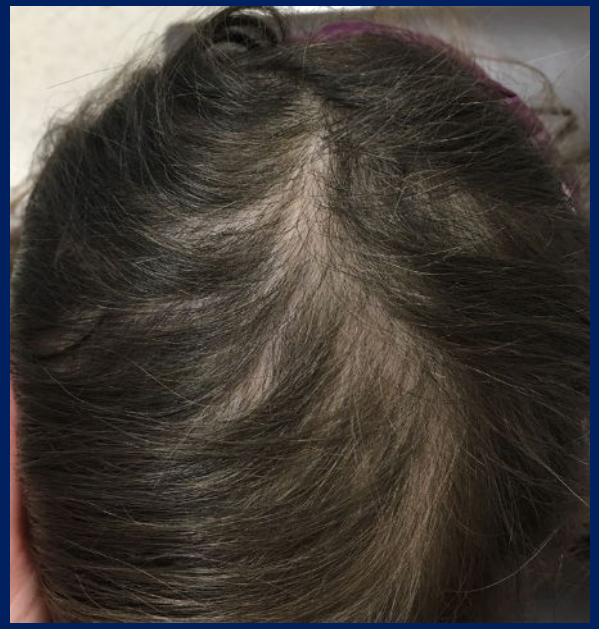
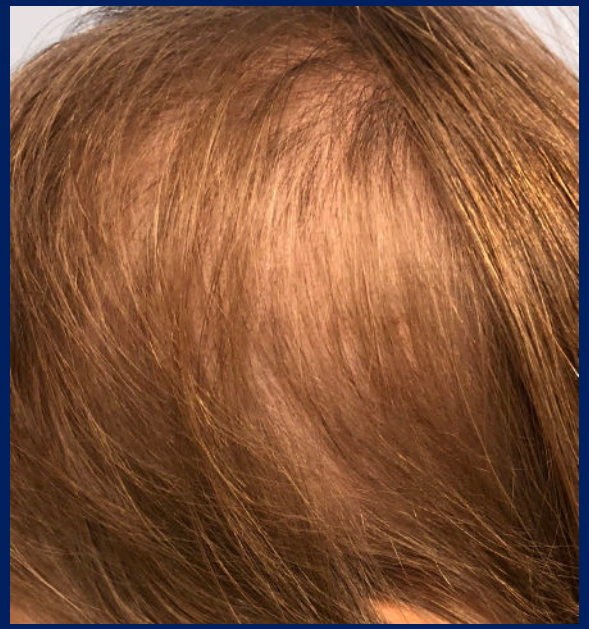
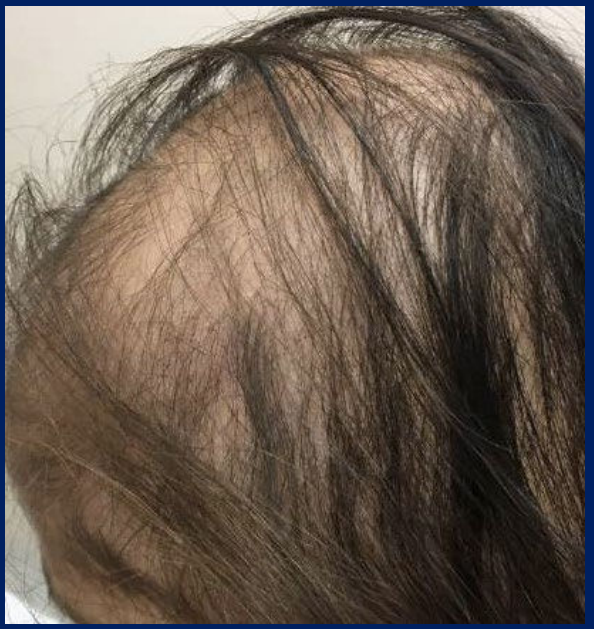
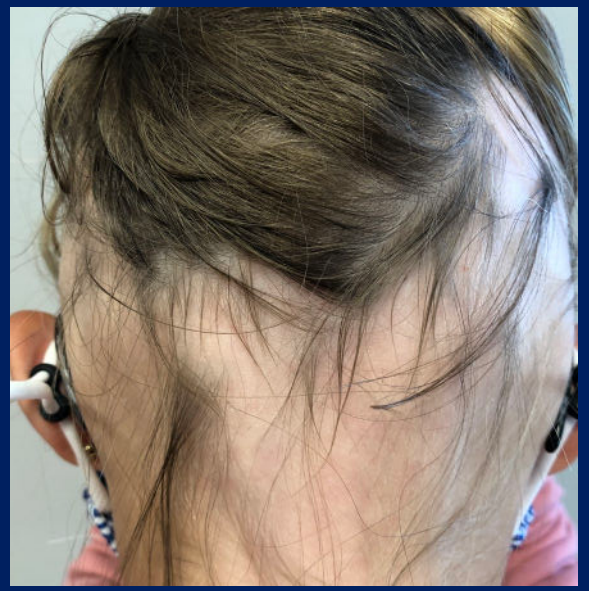
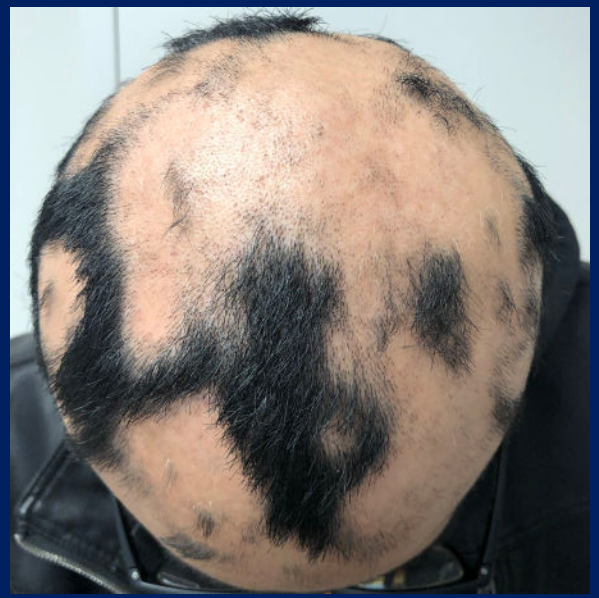
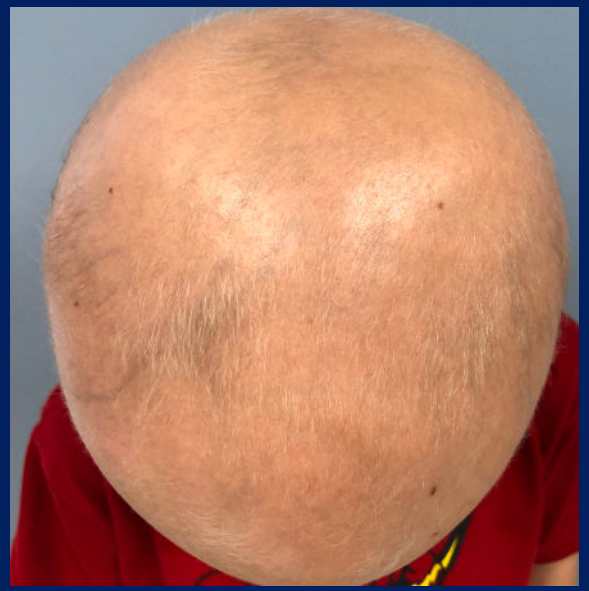
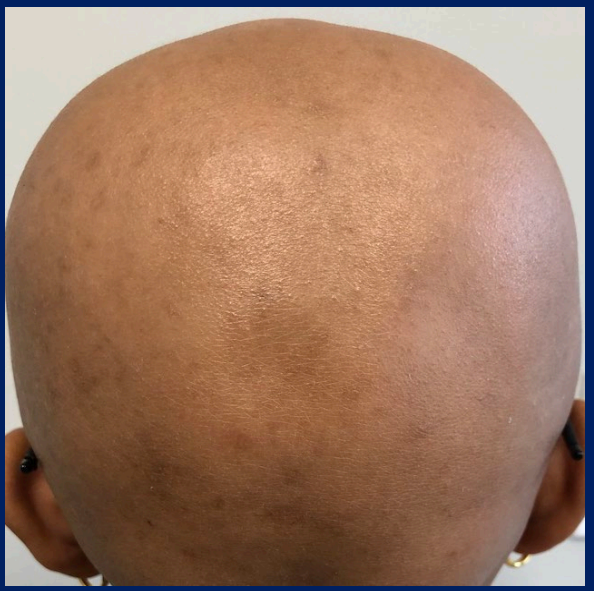
JAK Inhibitors for Alopecia Areata

Britt Craiglow, MD

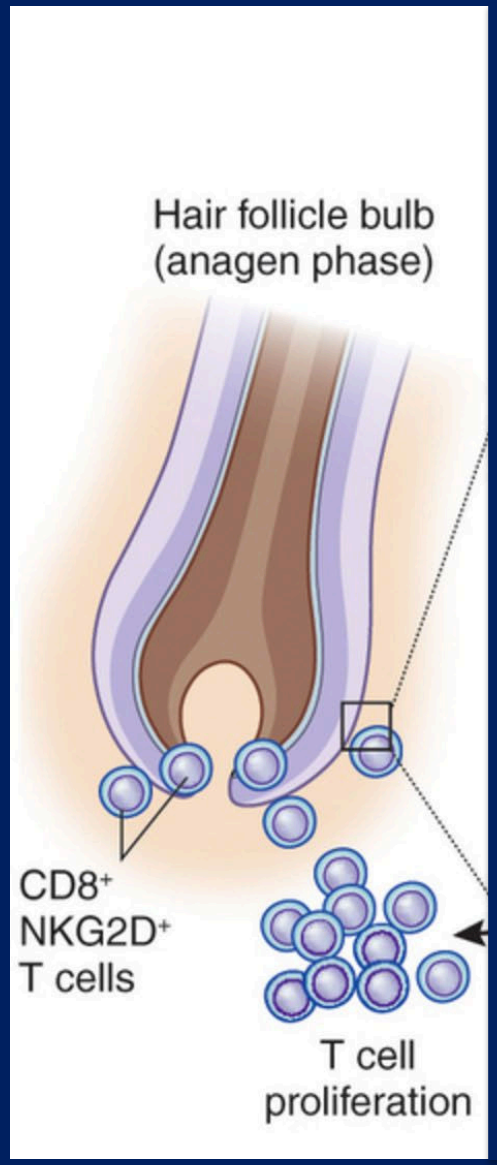
Disclosures

- I have received honoraria and/or fees from Abbvie, Dermavant, Eli Lilly, Pfizer, Regeneron, and Sanofi-Genzyme

- Will discuss off-label use of medications

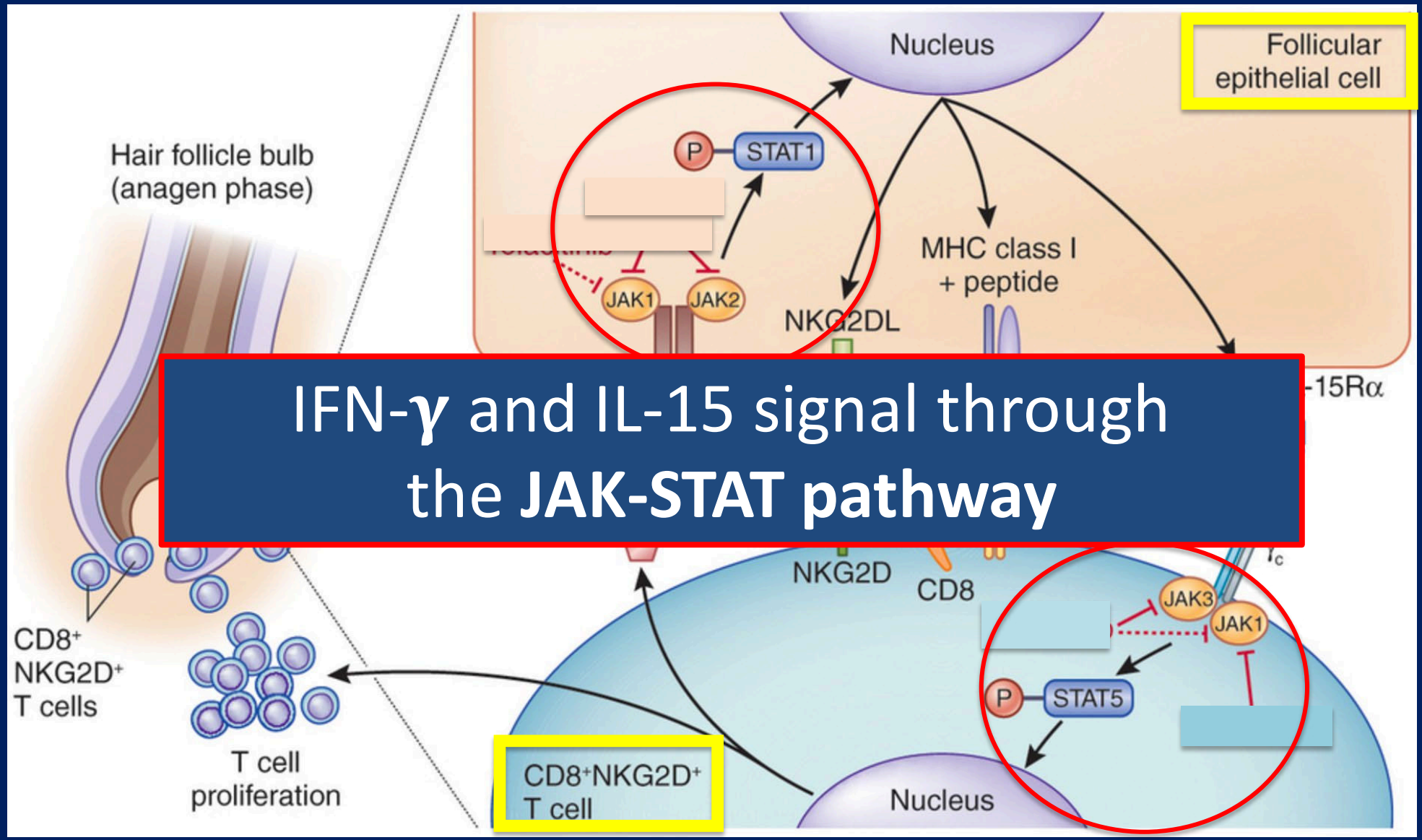









Alopecia Areata Pathogenesis



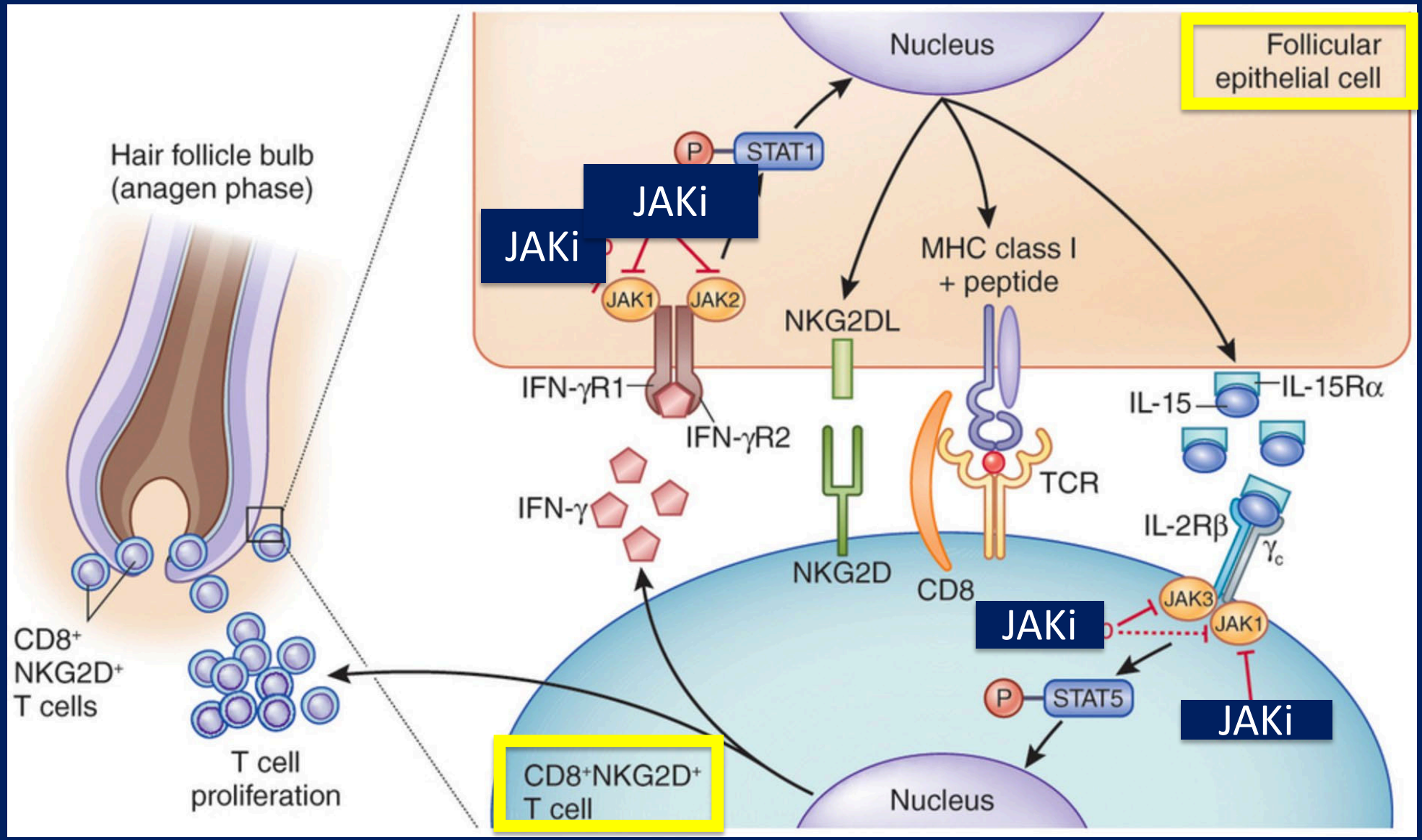
Kupper & Divito. Nature Medicine 2014:20:989–90

Alopecia Areata Pathogenesis



Kupper & Divito. Nature Medicine 2014:20:989–90

Alopecia Areata Pathogenesis



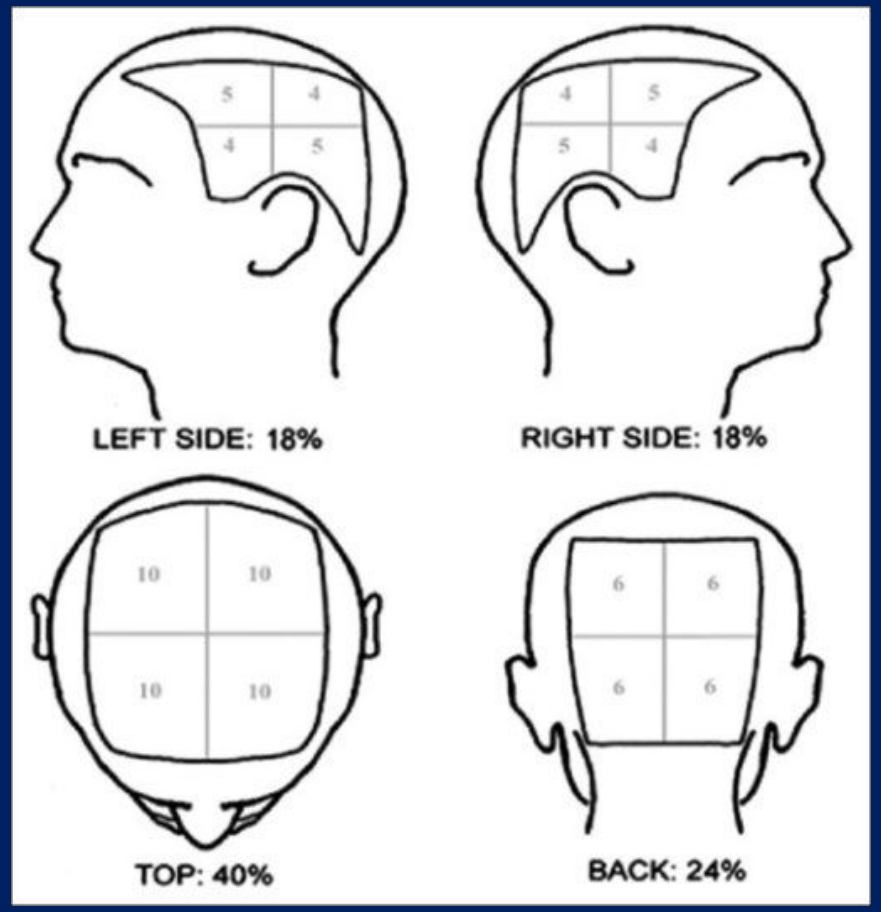
Kupper & Divito. Nature Medicine 2014:20:989–90

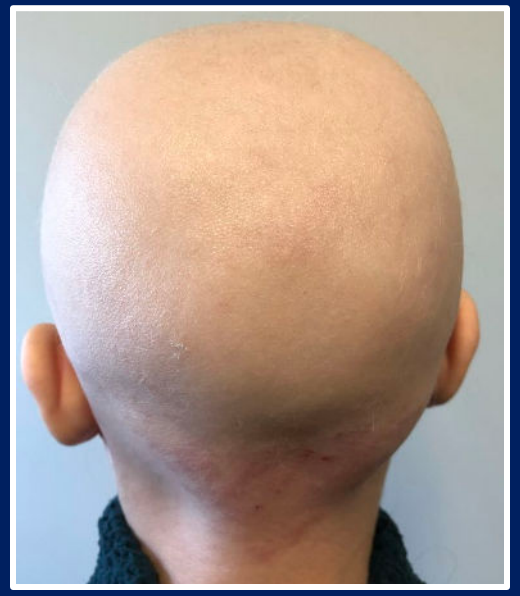
JAK Inhibitors for AA

- So far only ritlecitinib approved for AA in pediatric patients (12+)
- Numerous case reports / series of successful use of tofacitinib for AA in pediatric population

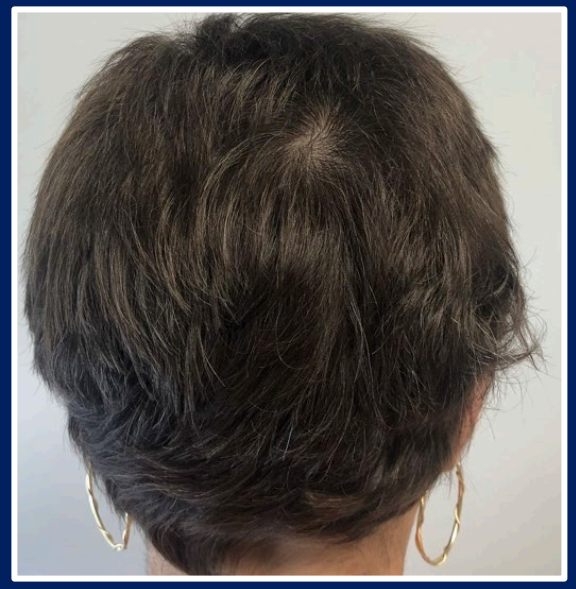
- Tofacitinib approved for JIA ages 2+
- Baricitinib approved in EU for JIA ages 2+, trials for AA for 12+, soon 6+

SALT Score





SALT score = 100



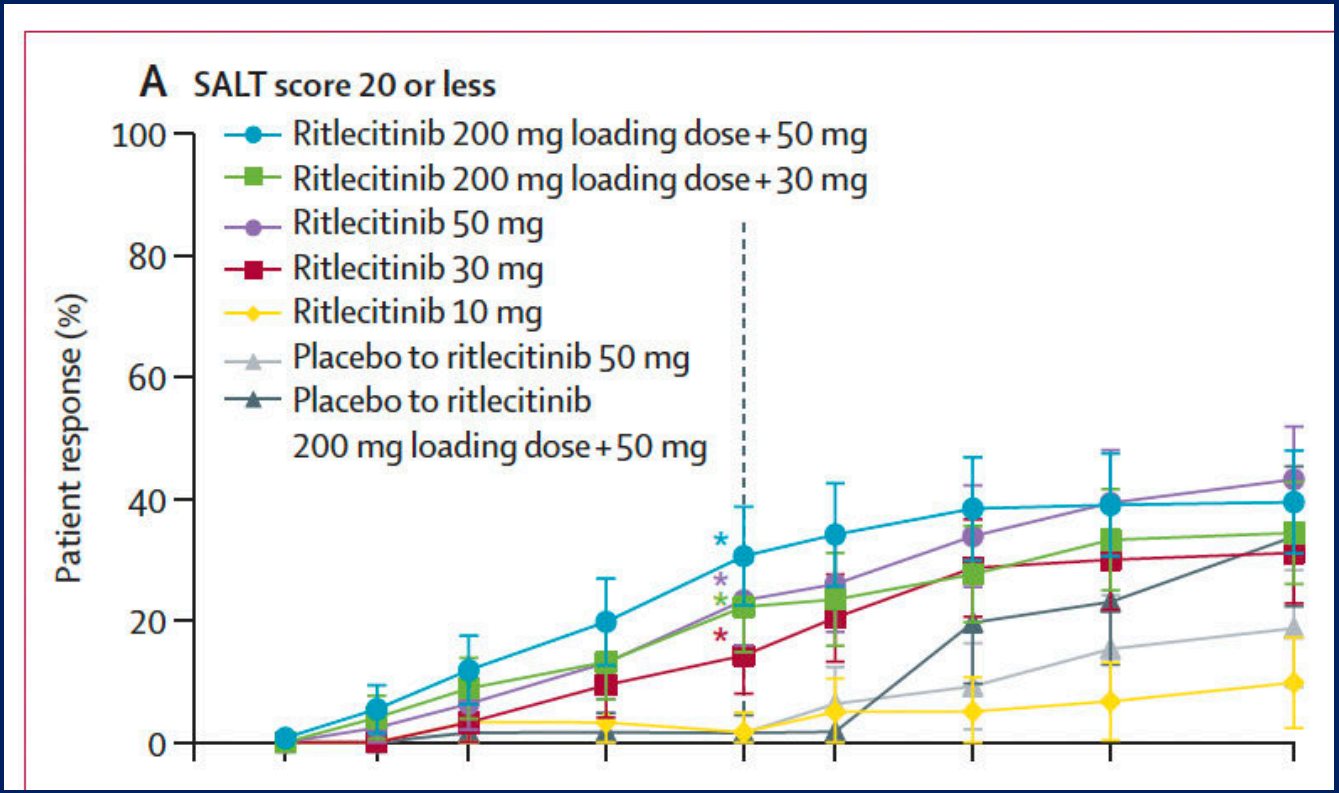
SALT score = 0

Olsen EA, et al. *J Am Acad Dermatol.* 2004;51:440-447.

Ritlecitinib

- FDA-approved for severe AA in patients 12+ summer 2023
- One dose: 50 mg daily
- JAK3/TEC Inhibitor

Ritlecitinib: Phase 3 Results



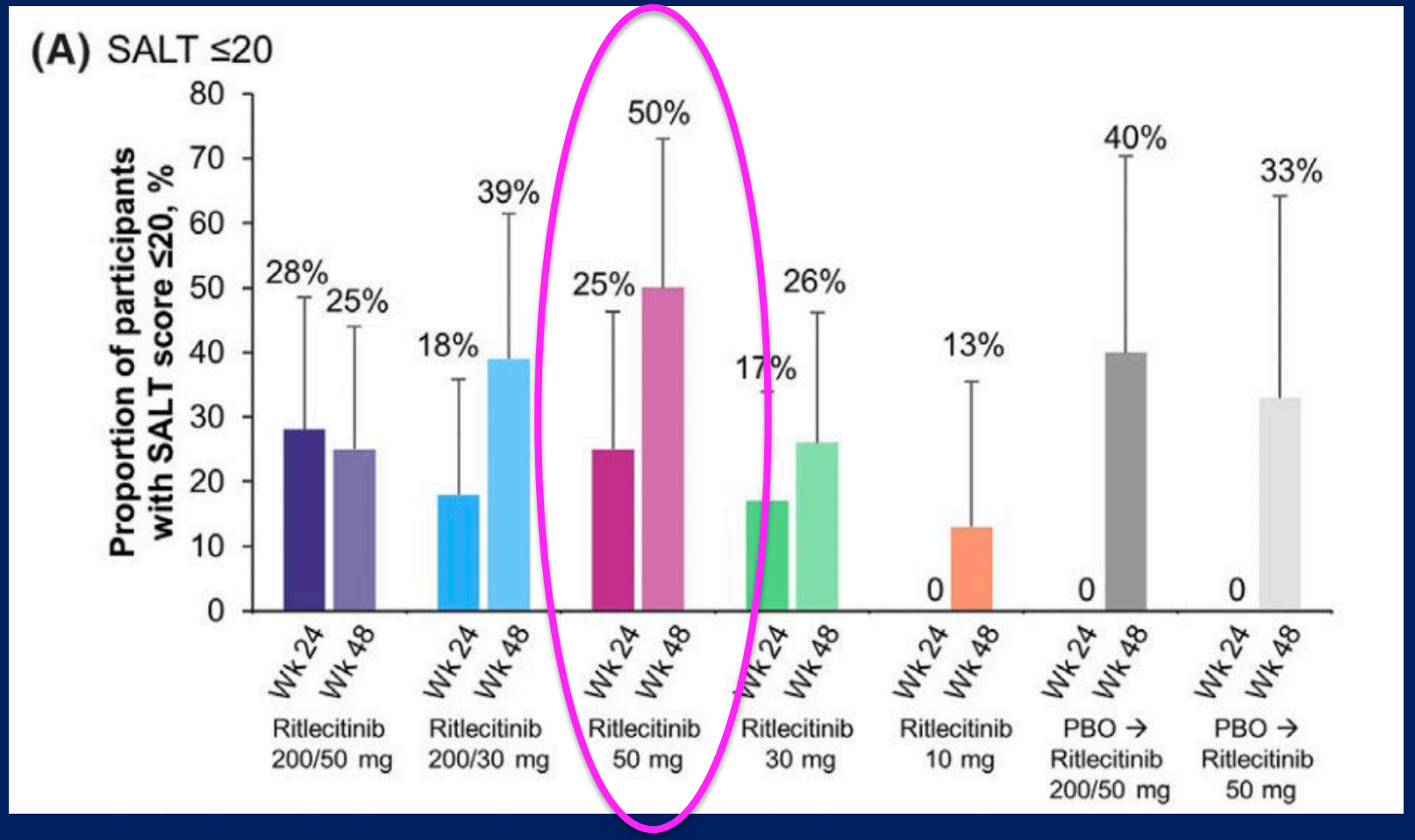
Patients achieving SALT ≤20:

24 weeks: 23%

48 weeks: 43%

King B, et al. Lancet 2023.

Ritlecitinib: Results in Adolescents



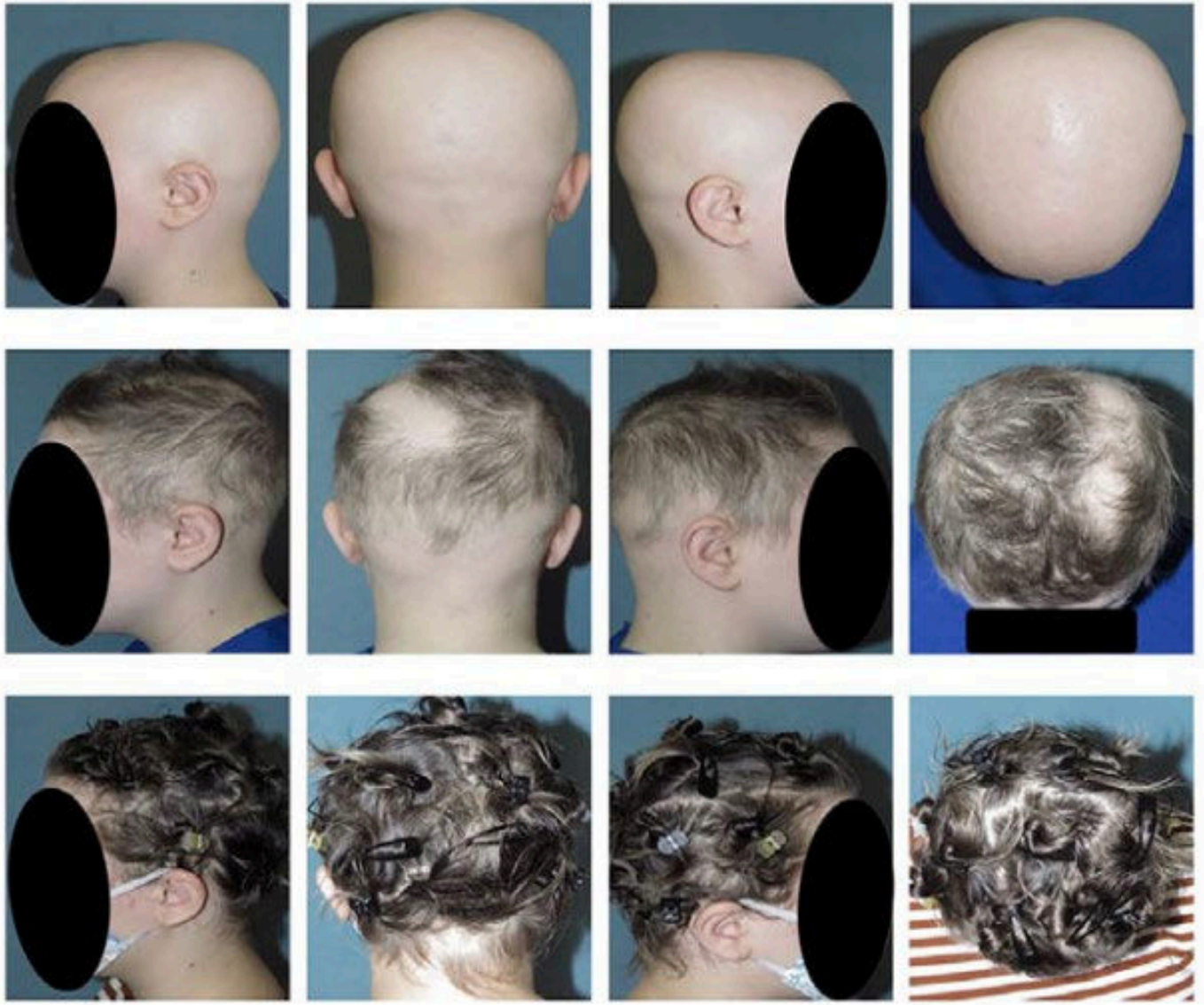
Patients achieving SALT ≤20:

24 weeks: 25%

48 weeks: 50%

Hordinsky M et al Ped Derm 2023.

(D) Representative photos



Hordinsky M et al Ped Derm 2023.

	Placebo to 50 mg (n=66)	Placebo to 200 mg then 50 mg (n=65)	10 mg ritlecitinib (n=62)	30 mg ritlecitinib (n=132)	50 mg ritlecitinib (n=130)	200 mg then 30 mg ritlecitinib (n=129)	200 mg then 50 mg ritlecitinib (n=131)
Permanent discontinuations due to AEs	4 (6%)	0	2 (3%)	6 (5%)	4 (3%)	2 (2%)	4 (3%)
Temporary dose interruptions due to AEs	8 (12%)	13 (20%)	5 (8%)	16 (12%)	20 (15%)	16 (12%)	17 (13%)
Patients with AEs	57 (86%)	54 (83%)	47 (76%)	106 (80%)	110 (85%)	105 (81%)	108 (82%)
AEs occurring in ≥10% of patients*							
Headache	8 (12%)	8 (12%)	12 (19%)	24 (18%)	16 (12%)	14 (11%)	17 (13%)
Nasopharyngitis	4 (6%)	7 (11%)	7 (11%)	21 (16%)	18 (14%)	21 (16%)	19 (15%)
Upper respiratory tract infection	6 (9%)	7 (11%)	2 (3%)	16 (12%)	11 (8%)	12 (9%)	18 (14%)
Nausea	1 (2%)	8 (12%)	3 (5%)	12 (9%)	3 (2%)	3 (2%)	11 (8%)
Acne	8 (12%)	5 (8%)	3 (5%)	12 (9%)	12 (9%)	10 (8%)	6 (5%)
Patients with SAEs†	3 (5%)	0	2 (3%)	1 (1%)	2 (2%)	2 (2%)	4 (3%)
AEs of special interest, n							
Herpes zoster	0	0	0	0	5	2	1
Serious infections	0	0	0	1‡	0	1§	2¶
Pulmonary embolism	0	0	0	0	1	0	0
Malignancies	0	0	0	0	1‖	0	1**

Data are n (%). Summary of AEs, SAEs, discontinuations, and AEs of special interest with ritlecitinib or placebo (safety analysis set). AE=adverse event. SAE=serious adverse event. *Individual AEs (by preferred term) reported in at least 10% of patients in a given treatment group during the indicated period. †List of SAEs is shown in the appendix (p 15). ‡Diverticulitis. §Appendicitis. ¶Empyema and sepsis (two events in one patient), appendicitis. ‖Breast cancer. **Invasive lobular breast carcinoma.

Table 4: **Adverse events in overall study period**

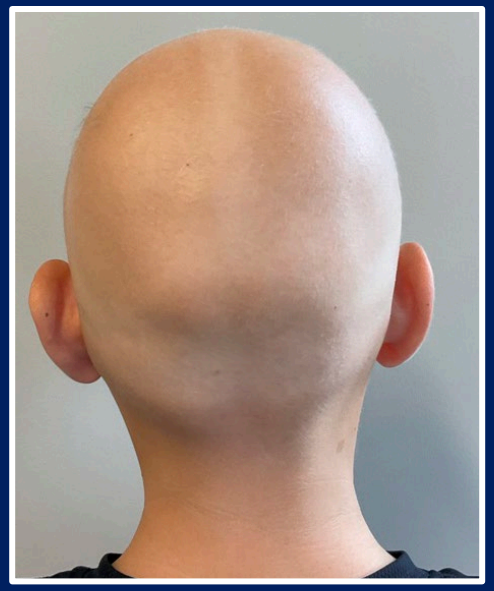
King B, et al. Lancet 2023.

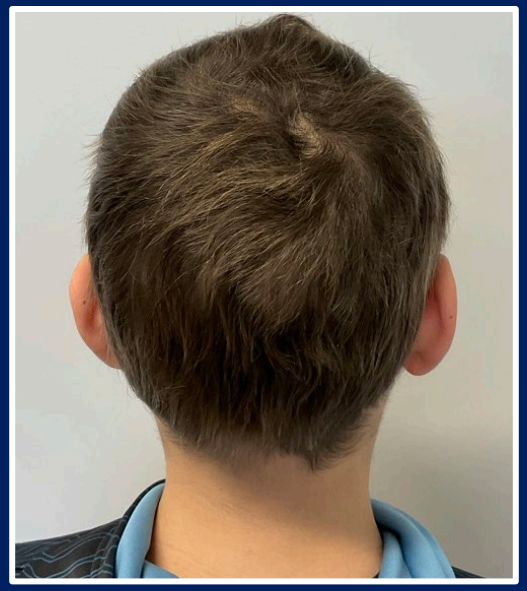
Laboratory Monitoring

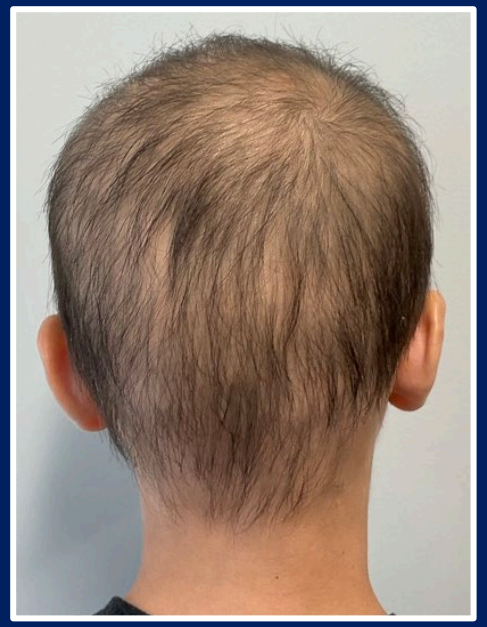
Baseline: CBC, CMP, Quantiferon-Gold / PPD, HIV, hepatitis serologies

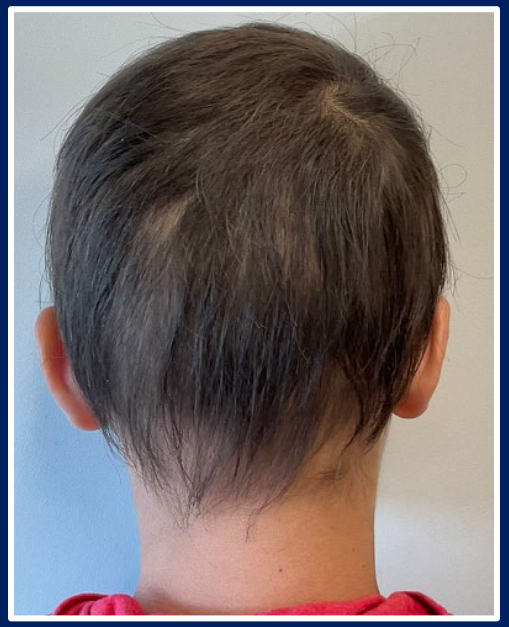
4 weeks : CBC

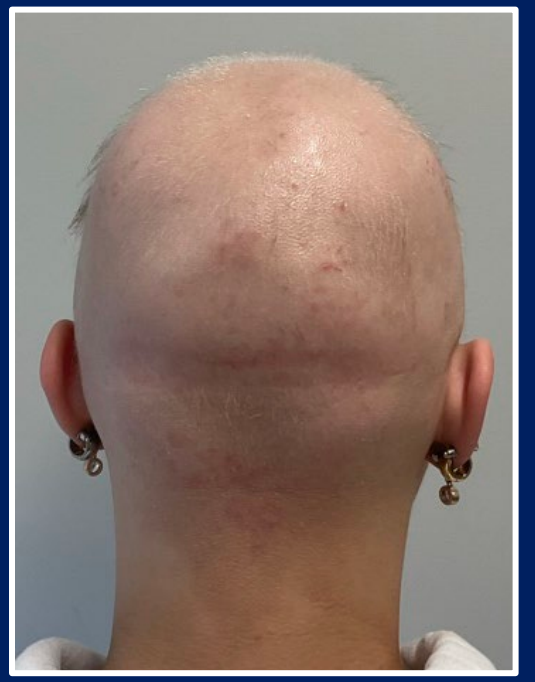
Annual: Quantiferon / PPD; consider HIV, HBV/HCV on individual basis











What about kids under 12?

- **CLINICAL TRIALS!!**

- Off-label tofacitinib, baricitinib or ritlecitinib
  - Access is biggest barrier
  - Weight-based dosing available for tofacitinib and baricitinib from JIA approvals

JAKi Pedi Considerations

- Frank discussion about risks/unknowns
  - *Weigh risk vs risk/consequence of not treating*
- Is AA changing the child's trajectory?
- **Window of opportunity for regrowth**

Clinical Management

- Adjuvant oral minoxidil unless contraindicated
- Evaluate ~every 3-4 months initially
- Hope for near-complete scalp hair regrowth over 6-12 months
  - Response patterns highly variable
  - Can use intralesional/topical corticosteroids for recalcitrant patches

Down-titration / discontinuation

- Chronic disease = chronic therapy
- Stakes are HIGH with hair
- Can consider SLOW dose reduction after at least 12 months of full regrowth but most patients will require ongoing treatment

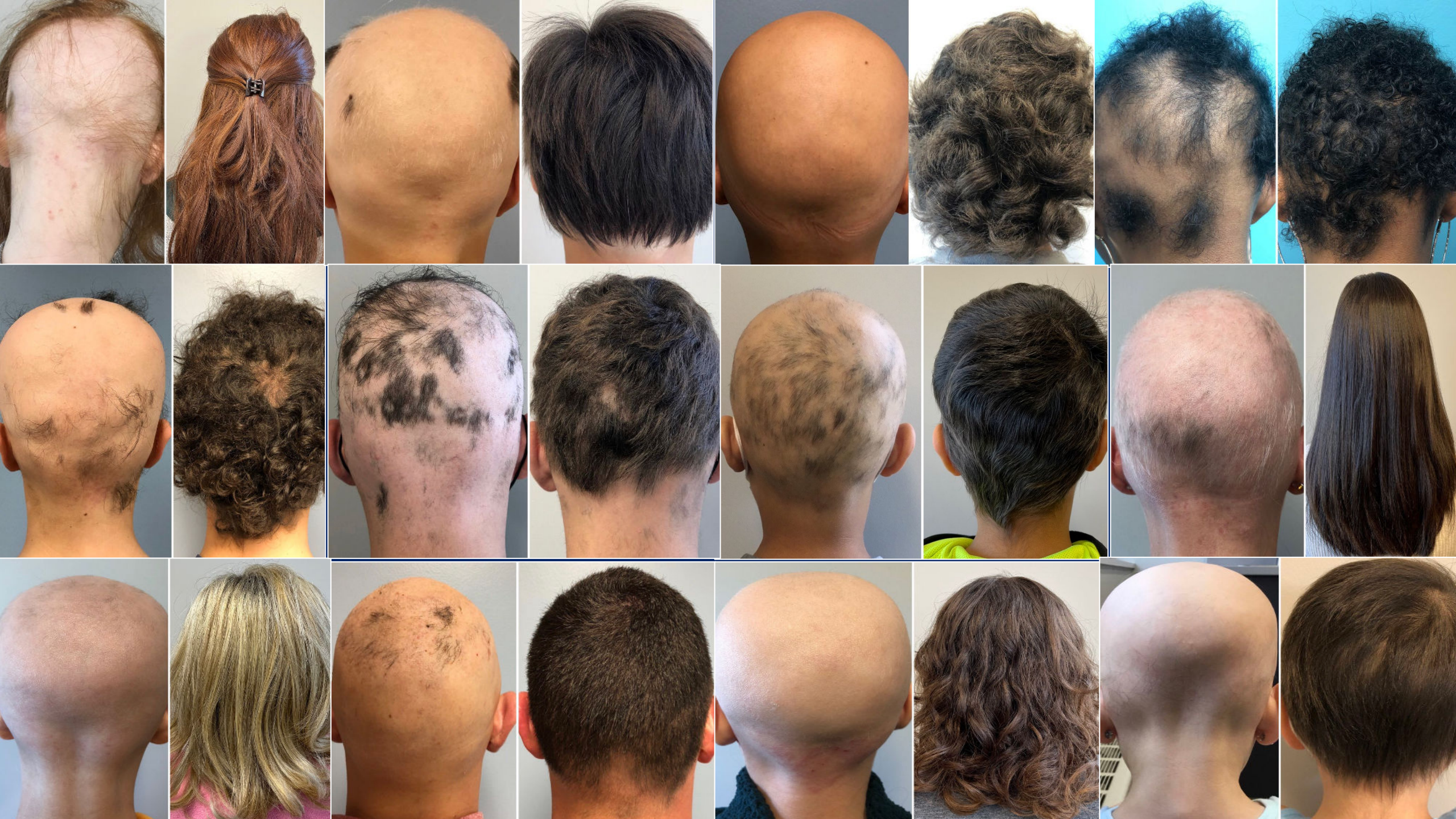
The thought of stopping [oral JAKi] makes me feel physically ill. I honestly don't know what I will do if I have to face the world again as a bald teenager. I was strong then, but I just don't know if I can do it again. And I don't know how to keep living my life if every single day could be the day I lose all my hair again.

- Zoe, age 15

As a 16-year-old kid this was very scarring to me, I became extremely self conscious… it really took a toll on me mentally. I became hateful towards myself, I stopped showing up to school because I was worried about what people would think of me… To be honest I was caught up in my head a lot, especially when I was alone. I remember all the restless nights crying to my mom and questioning why me…

As a 16-year-old kid this was very scarring to me, I became extremely self conscious… it really took a toll on me mentally. I became hateful towards myself, I stopped showing up to school because I was worried about what people would think of me… To be honest I was caught up in my head a lot, especially when I was alone. I remember all the restless nights crying to my mom and questioning why me…

[Oral JAKi] has changed my life, I was extremely suicidal and this medicine saved me.



Thank You