The Use of Upadacitinib for Refractory Pityriasis Rubra Pilaris: A Case Report

Tajauna Batchelor, OMS-IV

University of Pikeville - Kentucky College of Osteopathic Medicine

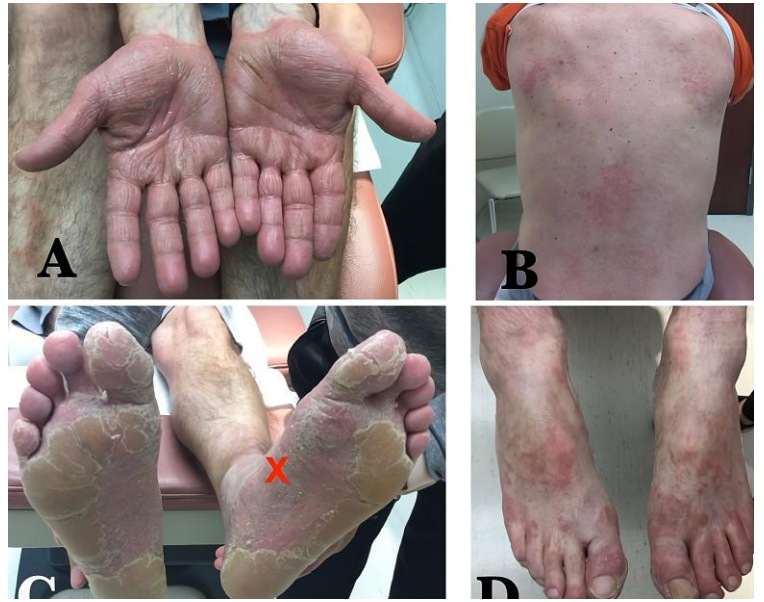
Introduction: What is Pityriasis Rubra Pilaris (PRP)

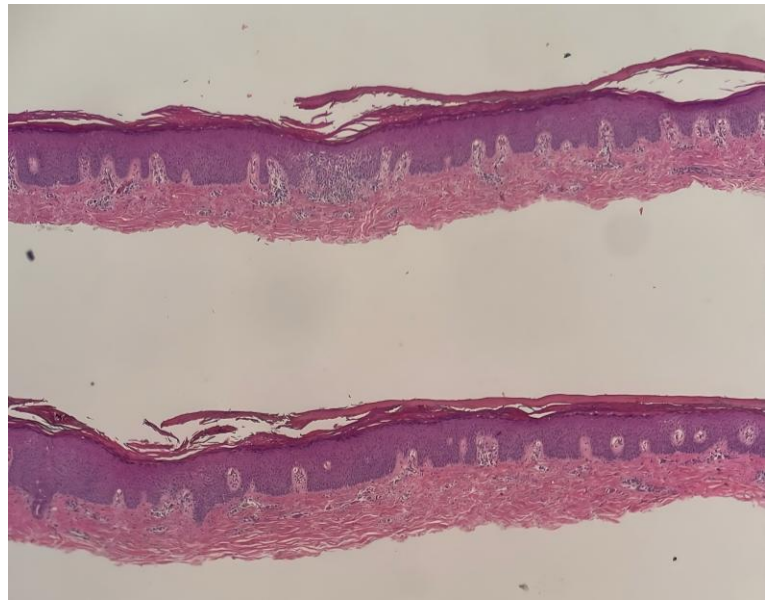
- Inflammatory papulosquamous dermatosis
- Key clinical features include:
  - Orange-red scaly papules and plaques with “islands of sparing”
  - Palmoplantar hyperkeratosis

- Six subtypes, with Classic Adult-onset (Type I) being the most common
- Limited standard guidelines and often recalcitrant
- Emerging therapeutic target: Janus Kinase Inhibitors (JAKi)

Case Presentation: 57-year-old male with chronic, refractory PRP

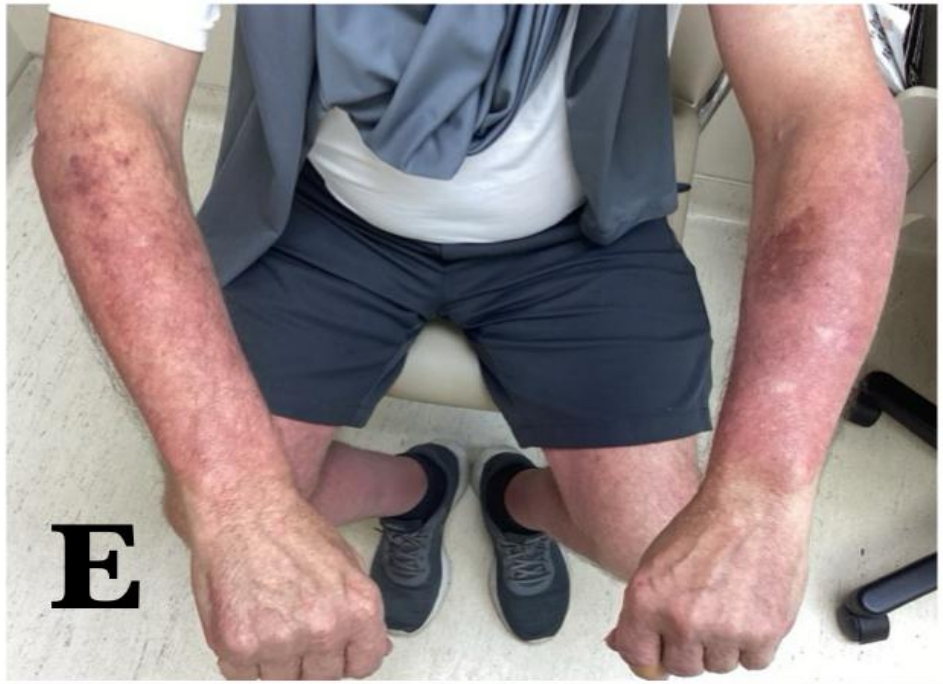
- 27-month history of progressive generalized pruritic eruption
- PMHx: Well-controlled Hypertension, No personal or family history of inflammatory dermatosis
- Exam:
  - Orange, waxy palmoplantar keratoderma
  - Red-orange plaques along the trunk and extremities, with areas of uninvolved skin
- Histopathology: Alternating ortho- and parakeratosis + thickened rete ridges

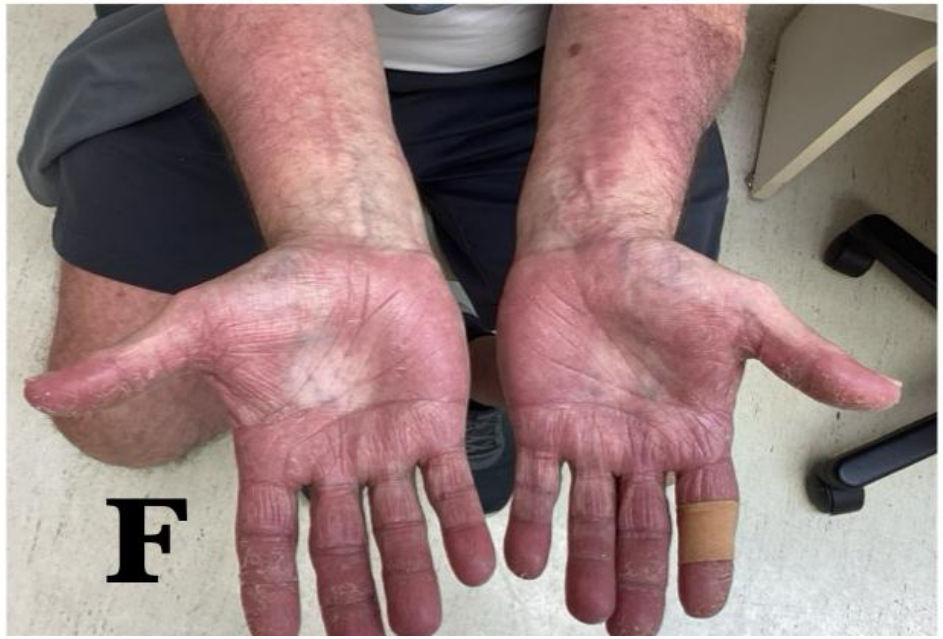


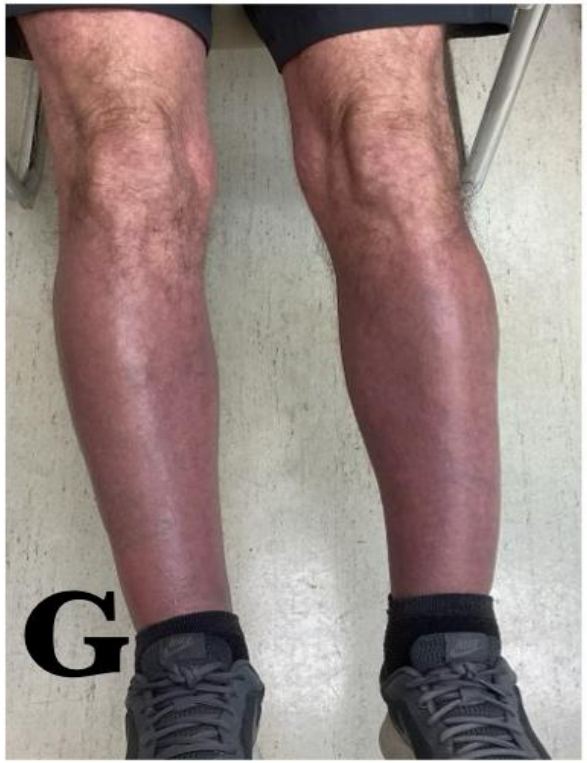


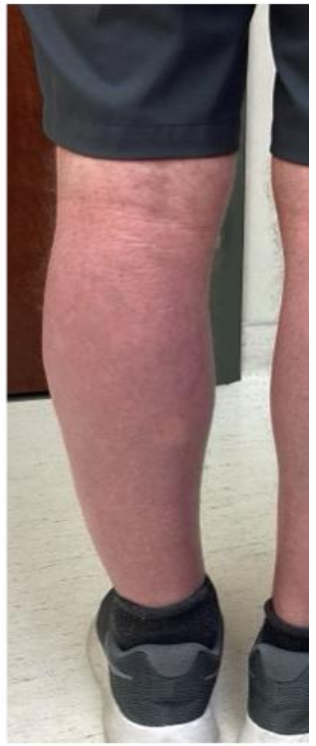
Treatment and Timeline Response

Therapy	Outcome
Topicals + Prednisone 60 mg taper + Cyclosporine 200 mg daily for 6 weeks	Cleared → relapsed 2 weeks after discontinuing treatment
Infliximab 5 mg/kg every 8 weeks + Dapsone 50 mg daily + Methotrexate 25 mg weekly (initiated concurrently)	Temporary improvement (3 months)
Ixekizumab 80 mg every 4 weeks	No response (3 months)
Ustekinumab 90 mg every 12 weeks	11.5 months remission → relapse
Upadacitinib 30 mg daily	Near-complete clearance in 2 weeks → sustained ~1 yr remission (no AEs)

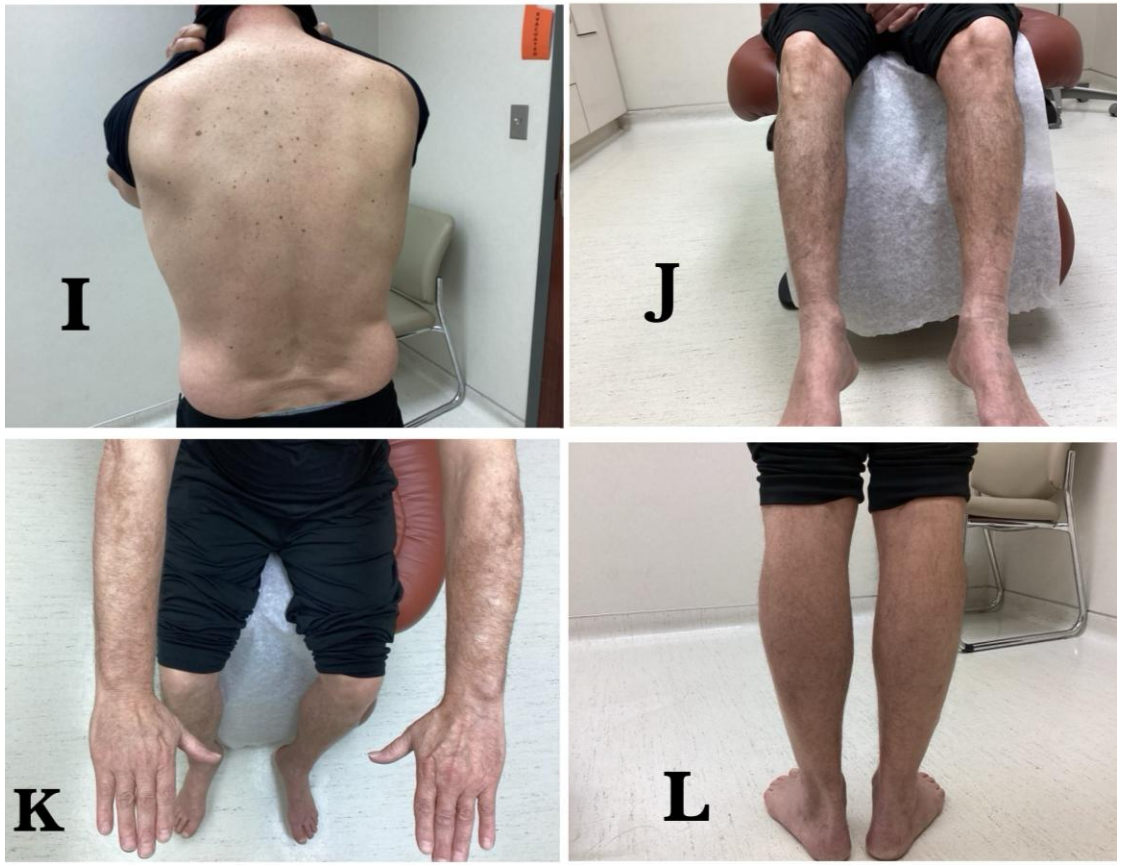


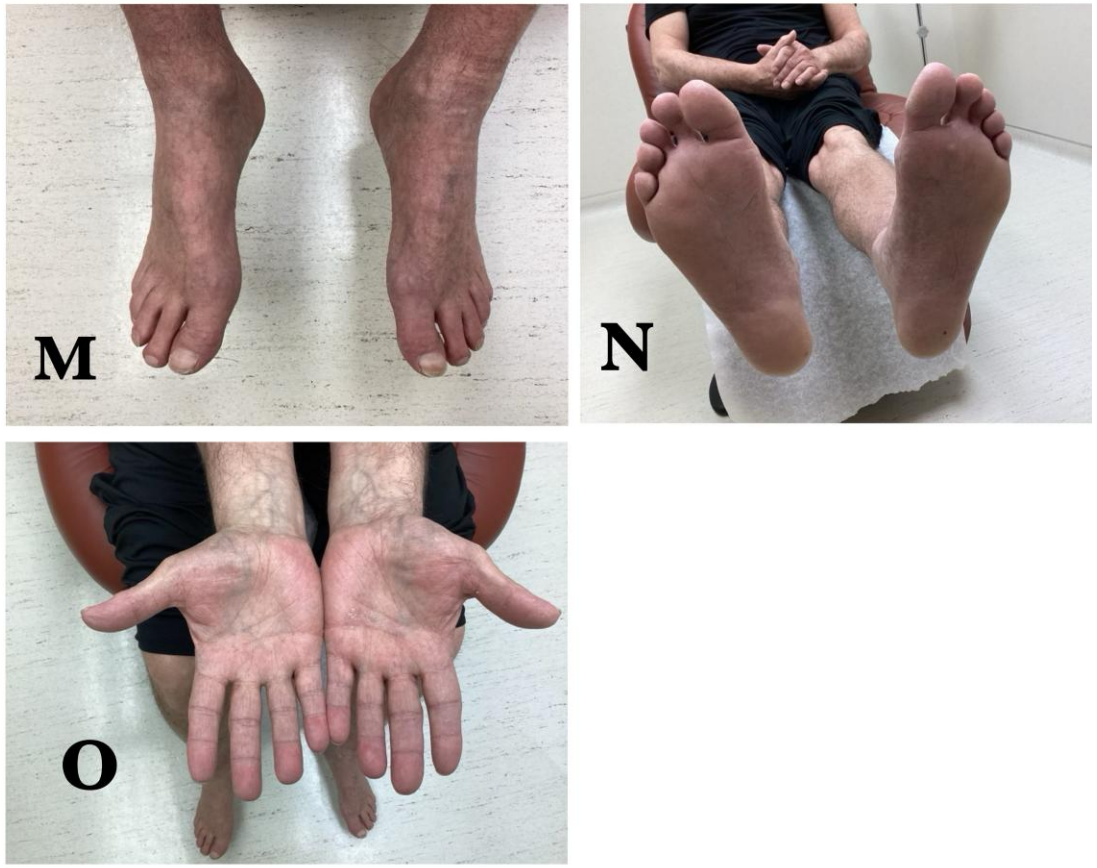






Relapse after Ustekinumab

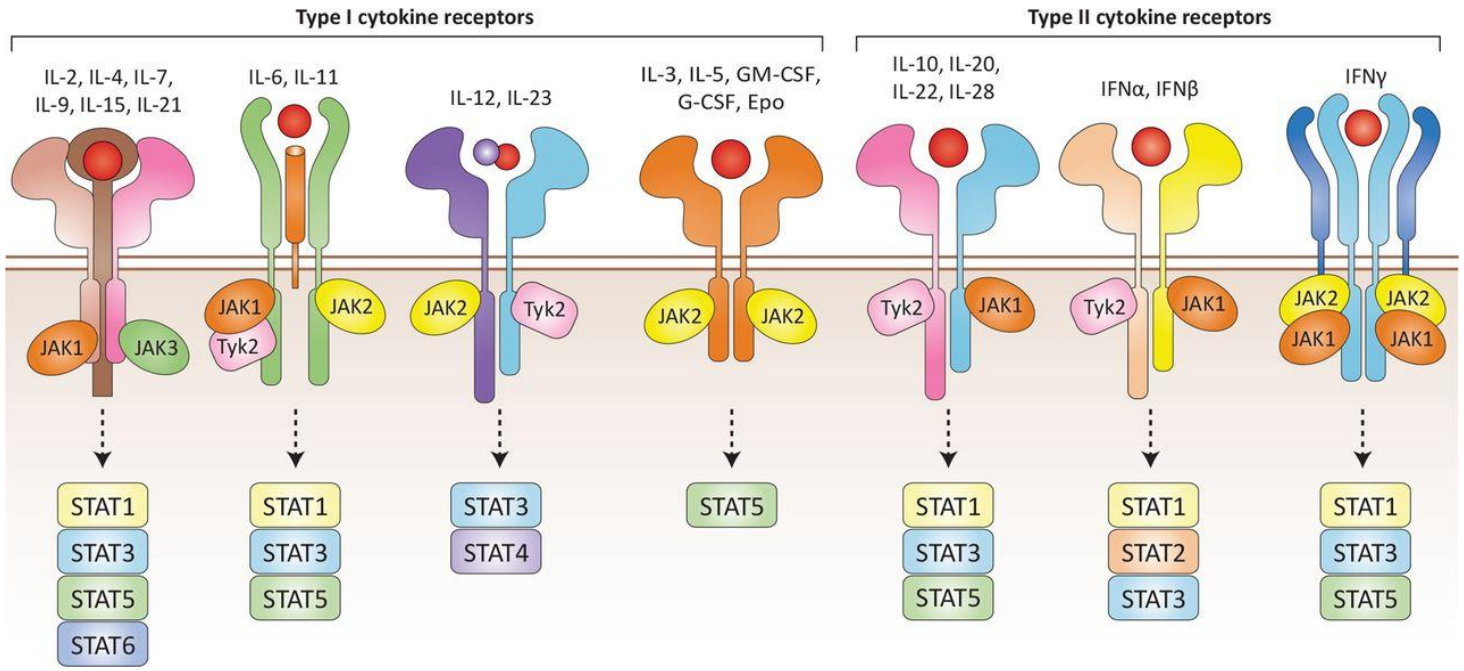




5 months post-Upadacitinib

Significance: Expanding PRP Treatment Options

- Pathogenesis of PRP is poorly understood, but is often compared to psoriasis
  - Possibly Th1/Th17-driven inflammation
- JAKis offer broad immunomodulatory effects and selectivity for specific enzymes
- Symptoms and rash returned within days after the dose was reduced to 15 mg daily.



Take-Home Points:

Refractory PRP achieved rapid, sustained clearance with Upadacitinib 30 mg daily.

Suggests that JAKi may be a safe and effective alternative for recalcitrant cases.

Further studies are required to evaluate long-term safety and optimal dosing of JAKi in this patient population.

References and Acknowledgements

1. Greiling TM. Pityriasis rubra pilaris: Pathogenesis, clinical manifestations, and diagnosis. UpToDate. Published April 14, 2023. Accessed March 20, 2025.
2. Moretta G, Luca E, Stefani A. Management of refractory pityriasis rubra pilaris: Challenges and 77 solutions. Clin Cosmet Investig Dermatol. 2017;10:343-349.
3. Napolitano M, Abeni D, Didona B. Biologics for pityriasis rubra pilaris treatment: A review of 79 the literature. J Am Acad Dermatol. 2018;79(2):353-359.
4. Craiglow BG, Boyden LM, Hu R, et al. CARD14-associated papulosquamous eruption: A 81 spectrum including features of psoriasis and pityriasis rubra pilaris. J Am Acad Dermatol. 82 2018;79(3):487-494.
5. Takeichi T, Sugiura K, Nomura T, et al. Pityriasis rubra pilaris type V as an autoinflammatory 84 disease by CARD14 mutations. JAMA Dermatol. 2017;153(1):66-70.
6. Traves PG, Murray B, Campigotto F, Galien R, Meng A, Di Paolo JA. JAK selectivity and the 86 implications for clinical inhibition of pharmacodynamic cytokine signalling by filgotinib, 87 upadacitinib, tofacitinib, and baricitinib. Ann Rheum Dis. 2021;80(7):865-875. 88 doi:10.1136/annrheumdis-2020-219012.
7. Burmester GR, Cohen SB, Winthrop KL, et al. Safety profile of upadacitinib over 15 000 patient 90 years across rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, and atopic dermatitis. 91 RMD Open. 2023;9(1):e002735. doi:10.1136/rmdopen-2022-002735
8. Plante JG, Aleisa AI, Thiers BH. Pityriasis rubra pilaris in skin of color [published correction 93 appears in Int J Womens Dermatol. 2021;7(5Part B):868]. Int J Womens Dermatol. 94 2021;7(2):207-208

tajaunabatchelor@upike.edu

Thank you to Dr. Conner at Dermatology Associates and to the facilitators of the Virginia Dermatology Society Conference

Patient consent was obtained