APPLICATION OF REAL-WORLD EFFECTIVENESS OUTCOMES OF UPADACITINIB TO CANADIAN TREAT-TO-TARGET CRITERIA FOR ATOPIC DERMATITIS: A RETROSPECTIVE MULTICENTER ANALYSIS OF 1 YEAR DATA

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Conflicts of Interest

Dr. Jensen Yeung has been an advisor, consultant, speaker, and/or investigator for AbbVie, Amgen, Anacor, Arcutis, Astellas, Bausche, Baxalta, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Centocor, Coherus, Dermira, Forward, Fresenius Kabi, Galderma, Incyte, Janssen, LEO Pharma, Medimmune, Merck, Novartis, Pfizer, Regeneron, Roche, Sanofi Genzyme, Sun Pharma, Takeda, UCB, and Xenon.

Introduction

- Randomized controlled trials have demonstrated the efficacy and safety of upadacitinib in moderate-to-severe atopic dermatitis (AD).

- However, real-world evidence on treatment outcomes and achievement of Canadian target-to-treat (T2T) metrics with upadacitinib remains limited.[1,2]

- We conducted a retrospective multicenter study of upadacitinib for AD as per the Canadian T2T criteria as outlined by Yeung et al (2023).[3]

1. Katoh N, Ohya Y, Murota H, et al. Safety and Efficacy of Upadacitinib for Atopic Dermatitis in Japan: 2-Year Interim Results from the Phase 3 Rising Up Study. *Dermatol Ther (Heidelb)*. 2023;13(1):221-234. doi:10.1007/s13555-022-00842-7
2. Simpson EL, Papp KA, Blauvelt A, et al. Efficacy and Safety of Upadacitinib in Patients With Moderate to Severe Atopic Dermatitis: Analysis of Follow-up Data From the Measure Up 1 and Measure Up 2 Randomized Clinical Trials. *JAMA Dermatol*. 2022;158(4):404-413. Doi:10.1001/jamadermatol.2022.0029
3. Yeung J, Gooderham MJ, Hong HCH, et al. Treat-to-target in the management of moderate-to-severe atopic dermatitis in adults: A Canadian perspective. Journal of the American Academy of Dermatology. 2023;89(2):372-375. doi:10.1016/j.jaad.2023.01.053

Overview of Canadian T2T in AD

Physician-Rated Outcome Measures

Topical therapies should be prescribed and optimized throughout the entire course of disease management. The T2T approach described below only applies to the use of systemic therapies.

12-16 weeks

One of:
- EASI 50
- PGA ≤ 2

AND

One of:
- Δ Pruritus NRS ↓≥3 vs BL
- Δ DLQI ↓≥4 vs BL
- Δ POEM ↓≥3 vs BL

6-8 months

One of:
- EASI 75
- PGA ≤ 2

AND

One of:
- Δ Pruritus NRS ↓≥ 4 vs BL
- Δ DLQI ↓≥ 5 vs BL
- Δ POEM ↓≥ 4 vs BL

1 year*

One of:
- Absolute EASI ≤ 7
- EASI 90
- PGA 0/1

AND

One of:
- Absolute Pruritus NRS ≤ 4
- Absolute DLQI ≤ 5
- Absolute POEM ≤ 7

Treatment target:

- 1-year target focuses on achieving minimal residual disease or relapses

Patient-Reported Outcome Measures

If endpoints are not met at time of assessment, consider treatment optimization and/or modification

Shared decision-making should occur throughout the process, as it increases adherence and results in improved QoL

*Clinical follow-up every 6-12 months thereafter using 1-year criteria.

AD, atopic dermatitis; BL, baseline; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; NRS, Numbering Rating Scale; PGA, Physician Global Assessment; POEM, Patient Oriented Eczema Measure; T2T, treat-to-target; QoL, quality-of-life.

Yeung J, *et al. J Am Acad Dermatol.* 2023;S0190-9622(23)00520-0.

Methods

- Our retrospective multicenter study included adult and adolescent patients with AD from three Canadian institutions who were initiated on upadacitinib treatment.
- All patients that initiated upadacitinib prior to July 2025, were included
- A nonresponder imputation (NRI) analysis was used to account for missing data.
- Safety was assessed via incidence of adverse events (AEs). Reasons for discontinuation and estimated time until discontinuation were recorded by physicians at each follow-up.

Methods

- The primary outcome was achievement of optimal targets at week 52±6 as per the **T2T metrics**, which included achievement of 1 clinician-reported outcome and 1 patient-reported outcome

T2T Criteria

1. **Clinician-Reported Outcome**
    1. Eczema Area and Severity Index (EASI) improvement of ≥ 90% (EASI 90), **or**
    2. Investigator's Global Assessment (IGA) score of 0 or 1, **or**
    3. Absolute EASI score ≤ 7
2. **Patient-Reported Outcome**
    1. Absolute Worst Pruritus Numeric Rating Scale (WP-NRS) ≤ 4, **or**
    2. Absolute Dermatology Life Quality Index (DLQI) ≤ 5, **or**
    3. Absolute Patient-Oriented Eczema Measure (POEM) ≤ 7

Results | Demographics/Characteristics

- **This analysis included a total of 192 patients**
  - Mean age: **44.6 years** (range: 12-79) years
  - Gender: **94 (49%) being male**

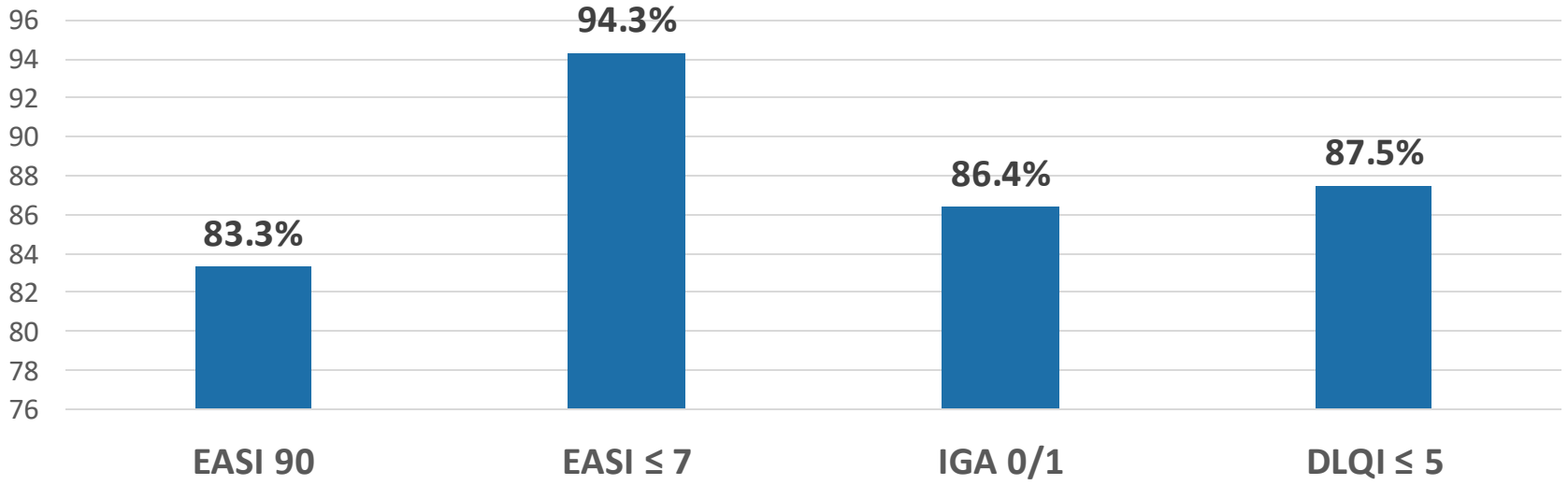
- **Common prior systemic treatments included:**
  - Cyclosporine (43.2%, 83/192)
  - Prednisone (29.2%, 56/192)
  - Methotrexate (26.6%, 51/192)

- **66.7% (128/192)** had an Investigator Global Assessment (IGA) score of 3 (moderate), and **17.2% (33/192)** had a score of 4 (severe) at baseline.
- The baseline Eczema Area and Severity Index (EASI) score was **14.3**

Results | Effectiveness (Continued)

Week 52 ± 6 Outcomes

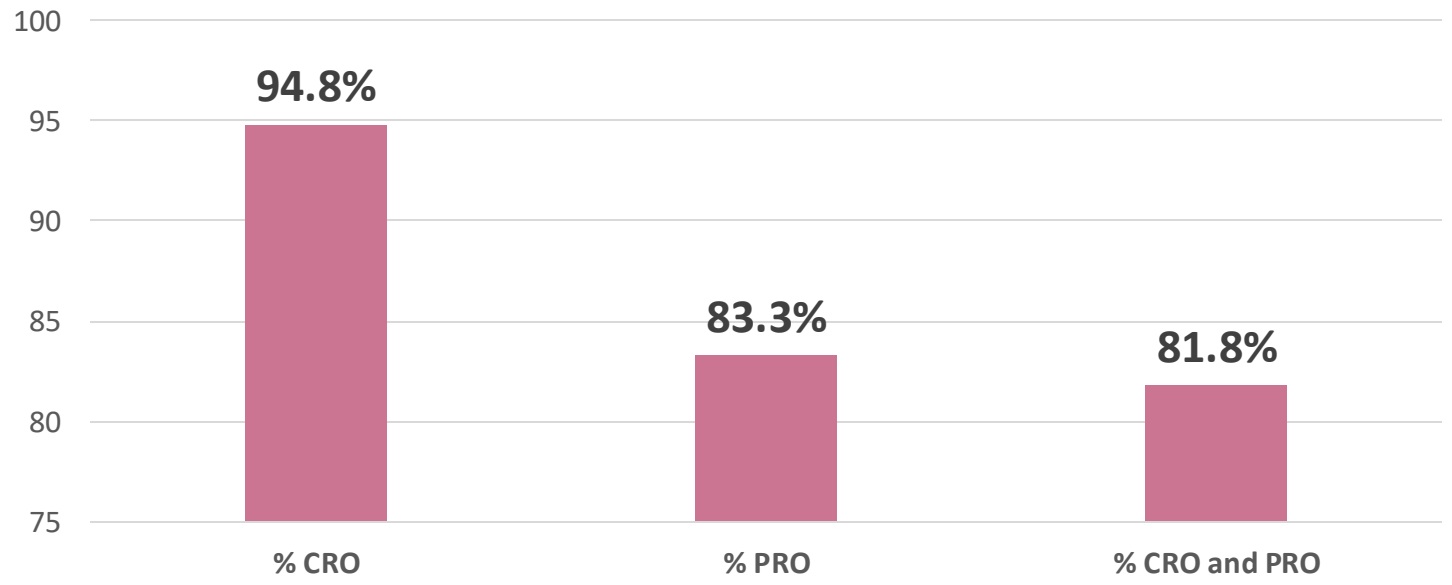
Effectiveness metrics	n/N (%)
EASI 90	160/192 (83.3%)
EASI ≤ 7	181/192 (94.3%)
IGA 0/1	166/192 (86.4%)
DLQI ≤ 5	168/192 (87.5%)



Results | Effectiveness (Continued)

Week 52 ± 6 Outcomes

- **Clinician-Reported Outcomes (CRO)**
  - Clinician-reported outcomes (EASI 90, IGA 1/0, or absolute EASI ≤7) were achieved by **94.8% (182/192) of patients**



Results | Effectiveness (Continued)

Week 52 ± 6 Outcomes

- **Patient-Reported Outcomes (PRO)***
  - Patient-reported outcomes (Absolute WP-NRS≤4, absolute DLQI ≤5, or absolute POEM ≤7) were achieved by **87.5% (168/192)**

- **Overall T2T Achievement**
  - Canadian T2T for AD were achieved by **87% (167/192)** of patients in total defined as ≥ 1 clinician-reported outcome (CRO) and ≥ 1 patient-reported outcome (PRO)

*WP-NRS was reported in n=52 patients due to limitations of real-world charting, POEM was not reported for patients

Results | Safety

- **Up to 1 year, there were 86 (44.8%) patients that experienced at least one AE while on upadacitinib**.

- The most common AEs included elevated creatine kinase (7.3%, 14/192), elevated triglycerides (5.2%, 10/192), and elevated liver enzymes (4.7%, 9/192).

- **Three discontinuations** (1.6%) were noted (HSV-1 [n=1], folliculitis [n=1], and respiratory failure [n=1])

Results | Safety (Continued)

Adverse event	n/N (%)
Elevated CK	14/192 (7.3%)
Elevated triglycerides	10/192 (5.2%)
Elevated liver enzymes	9/192 (4.7%)
Hyperlipidemia	6/192 (3.1%)
Acne	6/192 (3.1%)
UTI	5/192 (2.6%)
Neutropenia	5/192 (2.6%)
HSV	4/192 (2.1%)
Thrombocytosis	4/192 (2.1%)
Hypercholesterolemia	4/192 (2.1%)

Conclusions

- Our 52-week multicenter real-world study demonstrated that 87% (167/192) of patients with AD achieved the Canadian treat-to-target (T2T) criteria, defined as attainment of at least one clinician-reported and one patient-reported outcome

- Clinician-reported outcomes (EASI 90, IGA 0/1, or absolute EASI ≤7) were achieved by 94.8% (182/192) of patients, while patient-reported outcomes (absolute WP-NRS ≤4, absolute DLQI ≤5, or absolute POEM ≤7) were achieved by 87.5% (168/192)

- Adverse events (AEs) were observed in 44.8% (86/192) of patients, most commonly elevated creatine kinase (7.3%), triglycerides (5.2%), and liver enzymes (4.7%). Discontinuations due to AEs were rare (1.6%, 3/192)

- These findings support that upadacitinib demonstrates real-world effectiveness in achieving the Canadian T2T goals for AD, with favorable tolerability over one year, complementing outcomes reported in randomized controlled trials