Achieving minimal disease activity (MDA) with JAK inhibition in atopic dermatitis

"What's new from the Industry" session
RAJKA-ISAD Melbourne 2025

Saturday 25 October 2025 | 16:00

Faculty

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Conflict of Interest: Speaker for Sanofi, AbbVie, Leo Pharma, Eli Lilly, Disc Medicine. Advisory Board member for AbbVie, Leo pharma, Eli Lilly, Viatris, Galderma. Clinical trial investigator for AbbVie, Dermira, Mitsubishi Pharma, Disc Medicine, Kymab, Novartis, Amgen, Takeda, Pfizer, Tavotek, Zai Labs, Celldex.

The burden of AD is more than just itchy, painful skin[1]

AD, atopic dermatitis.

1. Simpson EL, et al. J Am Acad Dermatol. 2016;74:491–8.

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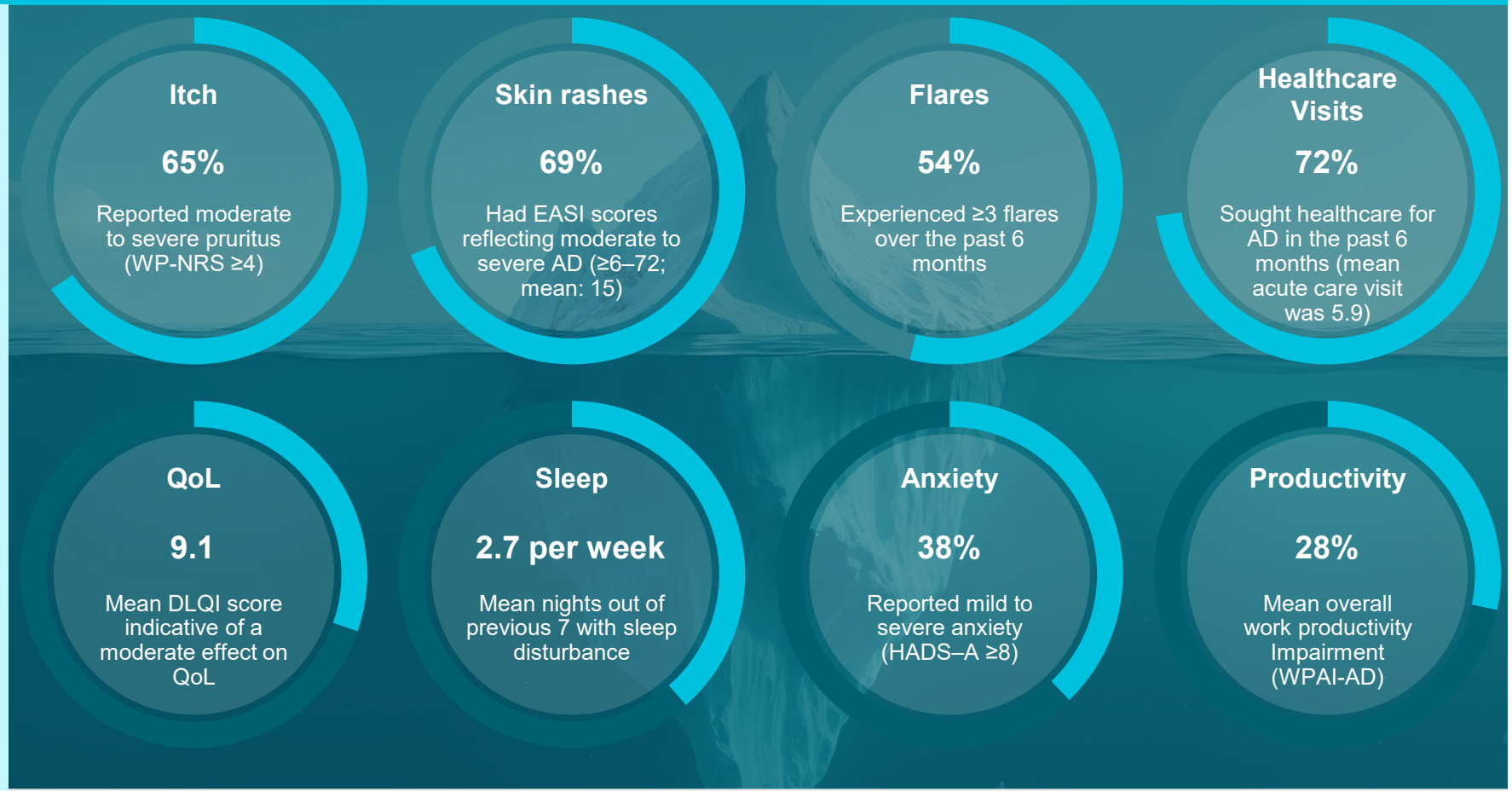
Despite receiving systemic therapy, many patients with moderate to severe AD continue to experience disease burden[1]

Of 1,558 patients included in the MEASURE-AD study,[a] only **56% were receiving systemic therapy**[1 b]

Of the 813 adult patients who received systemic therapy in MEASURE-AD,[a,b] **58% received dupilumab**[1]



[a]Based on results from MEASURE-AD, a 28-country, cross-sectional, observational study characterising the real-world burden of moderate to severe AD in 1,558 patients with physician-confirmed AD who were eligible for systemic therapy. AbbVie funded this study and participated in the study design, research, analysis, data collection, interpretation of data, reviewing, and approval of the presentation. Almost all patients (98.4%) in the total population were using prescribed AD medications. Although all patients were eligible for systemic treatment, only 56% were receiving systemic medication (15% systemic therapy as monotherapy) and 14% were receiving topical glucocorticoids or calcineurin inhibitor monotherapy. [b]Systemic therapy alone or in combination. Most used therapies: dupilumab (n=490; 31%), systemic corticosteroids (n=158; 10%), and methotrexate (n=141; 9%). AD, atopic dermatitis; EASI, Eczema Area and Severity Index; HCRU, healthcare resource utilisation; WP-NRS, Worst Pruritus Numerical Rating Scale.

1. Eyerich K, et al. *J Eur Acad Dermatol Venereol*. 2024;38(2):340–53.

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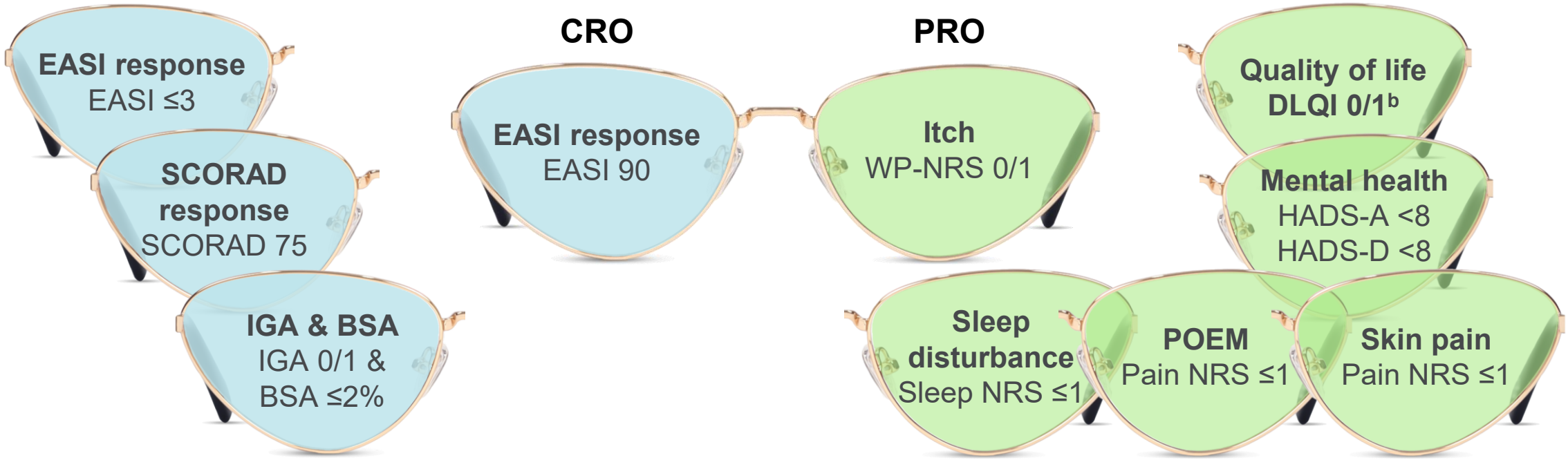
Minimal Disease Activity (MDA): an achievable goal in AD

Minimal Disease Activity (MDA) is defined as the simultaneous achievement of at least one optimal target in a CRO and at least one optimal target in a PRO[1,2 a]

Combining CROs and PROs offers a unique view, optimising the assessment of each patient's disease



This is not an exhaustive list.
[a]Targets are for all AD severities, unless otherwise specified; [b]For patients aged >16 years.
AD, atopic dermatitis; AHEAD, Aiming High in Eczema/Atopic Dermatitis; BSA, body surface area; CDLQI, Children's Dermatology Life Quality Index; CRO, clinician-reported outcome; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; HADS, Hospital Anxiety and Depression Scale; HADS-A, HADS-anxiety; HADS-D, HADS-depression; IDQoL, Infants' Dermatitis Quality of Life Index; IGA, Investigator Global Assessment; NRS, numeric rating scale; POEM, Patient-Oriented Eczema Measure; PRO, patient-reported outcome; SCORAD, SCORing Atopic Dermatitis; WP, worst pruritis.
1. Silverberg JI, et al. *J Eur Acad Dermatol Venereol.* 2024;38(11):2139–48; 2. Silverberg JI, et al. Dermatol Ther (Heidelb). 2025;15(9):2583–2594.

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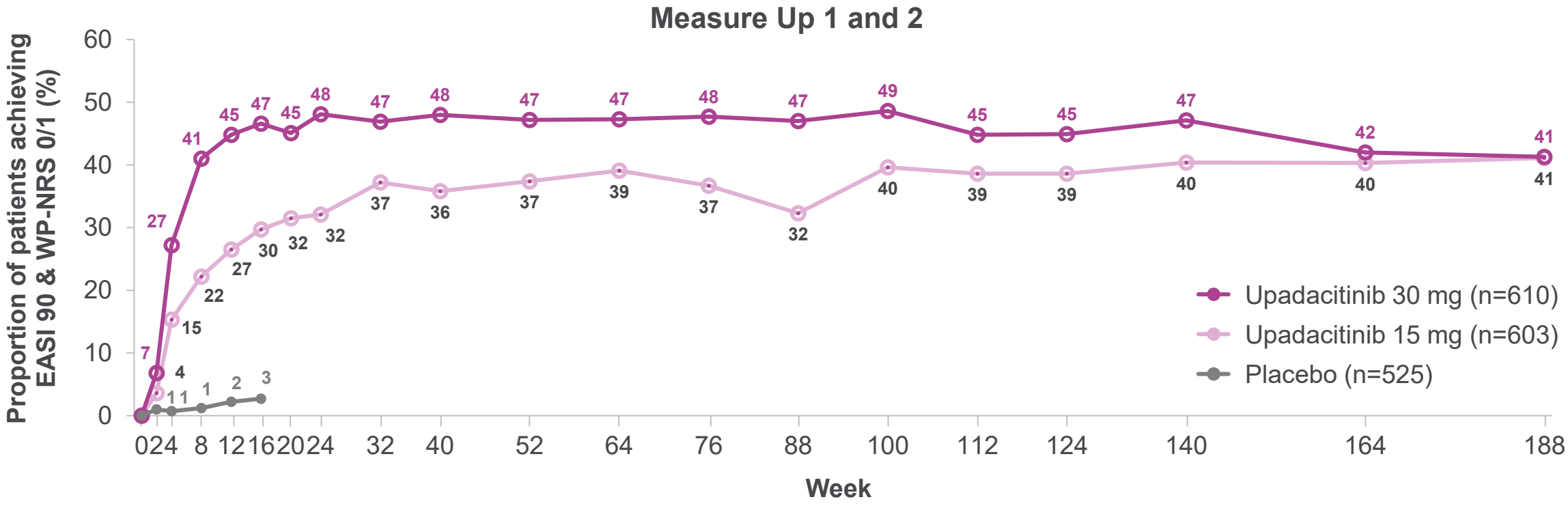
Treatment with upadacitinib may help adult and adolescent patients with moderate to severe AD achieve Minimal Disease Activity[a] (MDA, i.e., EASI 90 & WP-NRS 0/1) through 188 weeks of treatment[1]



Data are from content presented at scientific meetings and have not been published in peer reviewed publications.
Data are reported as observed cases. Analyses were conducted in the ITT population. WP-NRS was assessed in patients with WP-NRS scores >1 at baseline.
[a]Minimal Disease Activity is defined as the achievement of optimal treatment targets for ≥1 CRO and ≥1 PRO.[2]
AD, atopic dermatitis; CROI, Conference on Retroviruses and Opportunistic Infections; EASI 90, 90% improvement in Eczema Area and Severity Index; ITT, intention to treat; PRO, patient-reported outcome; WP-NRS, Worst Pruritus Numerical Rating Scale.
1. Irvine AD, et al. Revolutionizing Atopic Dermatitis (RAD) 2024 Virtual Meeting, 8 Dec 2024. Oral presentation DV-013377;
2. Silverberg J, et al. *J Eur Acad Dermatol Venereol.* 2024;3811:2139–48.

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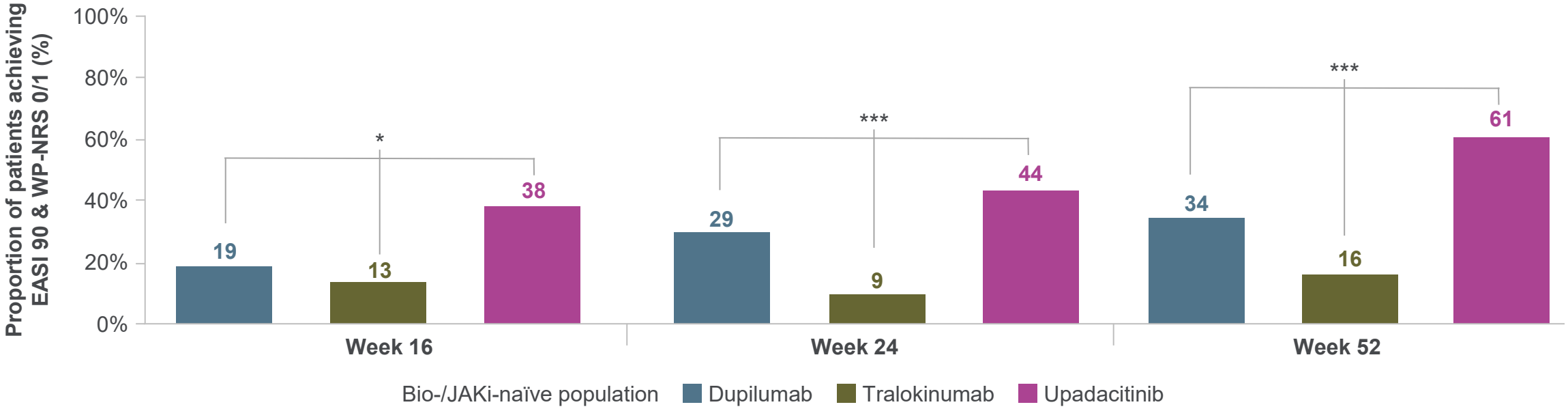
International multicentre study: Nearly 60% of adult biologic- and JAKi-naïve patients treated with upadacitinib in this RWE study achieved Minimal Disease Activity (MDA) through Week 52[1]

Upadacitinib demonstrated higher effectiveness in achieving stringent treatment targets of **EASI 90**, **itch-NRS 0/1** and a combined **EASI 90 & itch-NRS 0/1 or Minimal Disease Activity (MDA)** target compared to dupilumab and tralokinumab



1,052 biologic- and JAKi-naïve patients aged ≥12 years with moderate to severe AD were treated with either dupilumab (73.1%), tralokinumab (10.4%) or upadacitinib (16.5%) over 52 weeks

*p=0.021; ***p<0.001.
AD, atopic dermatitis; EASI, Eczema Area and Severity Index; EASI 90, ≥90% improvement in EASI score; JAKi, Janus kinase inhibitor; NRS, numerical rating scale; WP-NRS, Worst Pruritus Numerical Rating Scale.
1. Torres T, et al. *Dermatol Ther (Heidelb)*. 2025;15(8):2295–305.

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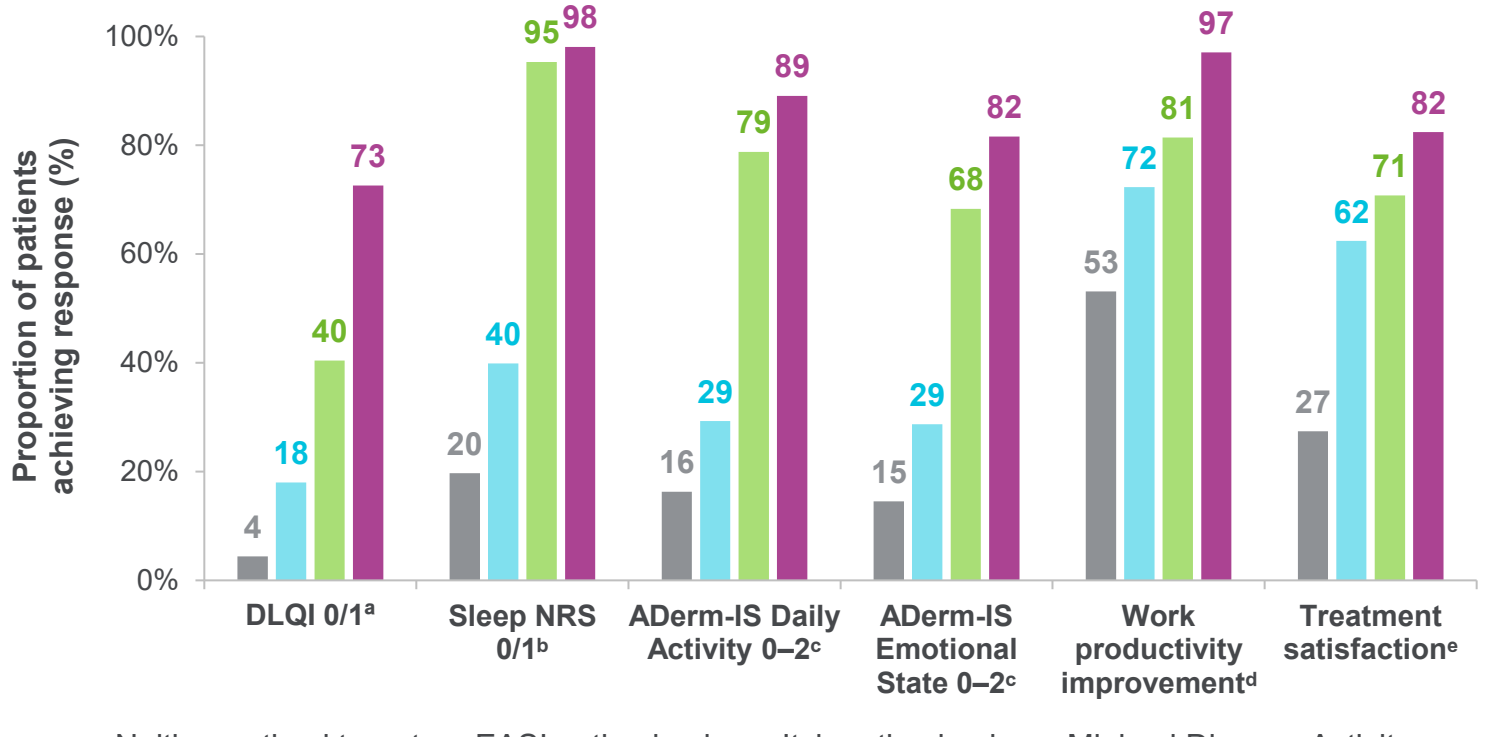
Minimal Disease Activity (MDA) achievement is associated with the greatest improvements in HRQoL outcomes[1]

Impact of achieving Minimal Disease Activity (MDA), PRO only, CRO only, or no targets on patient quality of life by EASI and WP-NRS itch



Patients who achieved Minimal Disease Activity (MDA) showed the greatest improvements across HRQoL domains – including symptoms, itch, sleep, daily activities, work productivity, and treatment satisfaction – compared with those achieving only PRO, only CRO, or neither target

[a]For patients with baseline score >1. [b]ADerm-IS item no. 2 sleep 0/1 among those with baseline score >1. [c]Among those with a baseline score > 2. [d]WPAI overall work impairment ≥20-point improvement among those with a baseline score ≥20. [e]Patient Global Impression of Treatment reporting "extremely satisfied" or "very satisfied."

ADerm-IS, Atopic Dermatitis Impact Scale; ADerm-SS, Atopic Dermatitis Symptom Scale; CRO, clinical-reported outcome; DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; HRQoL, health-related quality of life; POEM, Patient-Oriented Eczema Measure; PRO, patient-reported outcome; WP-NRS, Worst Pruritus Numerical Rating Scale.

1. Silverberg JI, et al. *Dermatol Ther (Heidelb).* 2025;15(8):2255–73.

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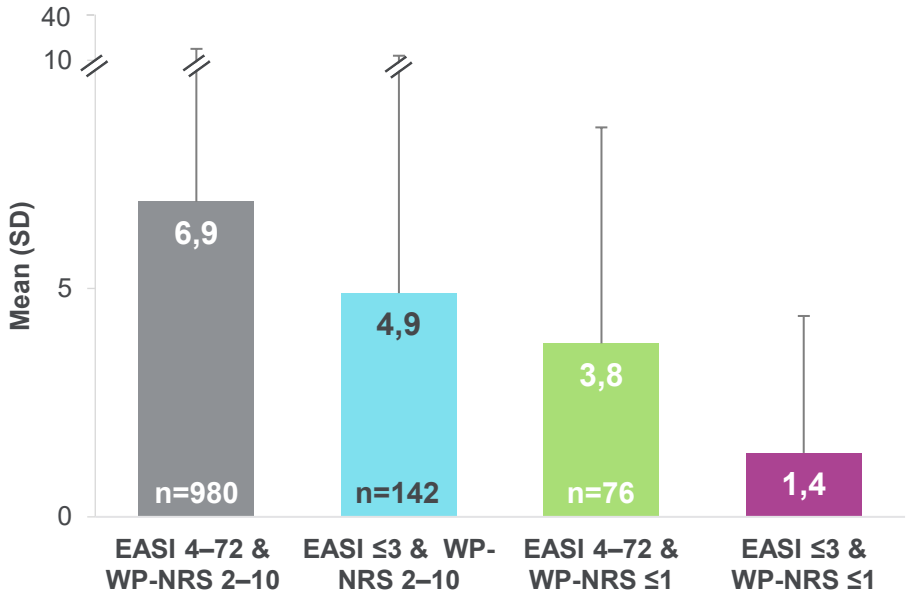
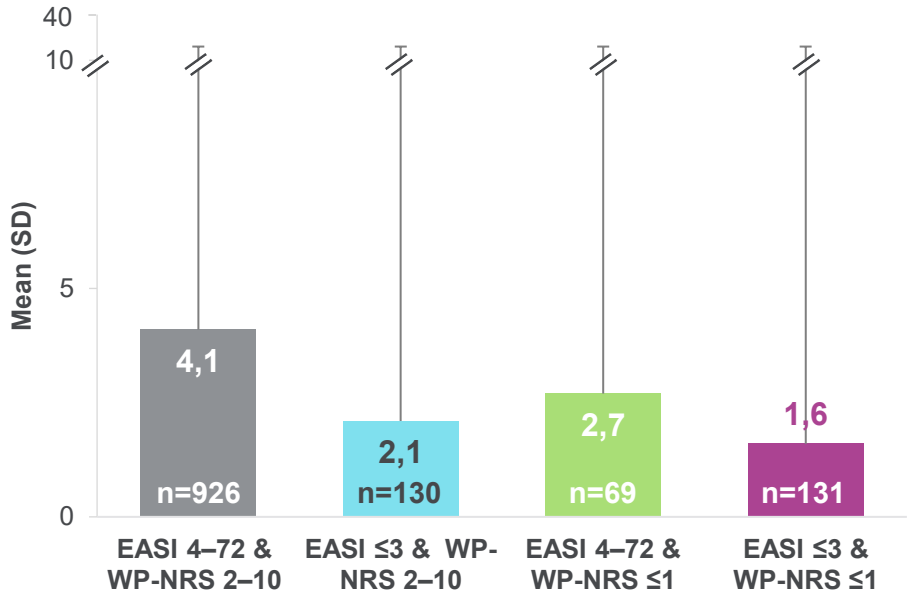
Additionally, adolescent and adult patients achieving Minimal Disease Activity (MDA) experienced fewer flares and healthcare visits compared to patients not achieving this target[1]

To examine the value of achieving Minimal Disease Activity (MDA), a post hoc analysis of a real world, 28-country study studied how Minimal Disease Activity (MDA) achievement might relate to flare occurrence and HCRU in patients with moderate to severe AD

Number of AD flares in the last 6 months



Number of AD-related healthcare visits in the last 6 months



In patients achieving Minimal Disease Activity (MDA), versus those who did not, there were fewer flares and AD-related healthcare visits

Data are from content presented at scientific meetings and have not been published in peer reviewed publications.

AD, atopic dermatitis; EASI, Eczema Area and Severity Index; CRO, clinician-reported outcome; HCRU, healthcare resource utilisation; PRO, patient-reported outcome; SD, standard definition; WP-NRS, Worst Pruritus Numerical Rating Scale.

1. Silverberg JI, et al. 2025 American Academy of Dermatology Annual Meeting (AAD 2025), 7–11 March, 2025, Orlando, FL, USA. Poster 63852.

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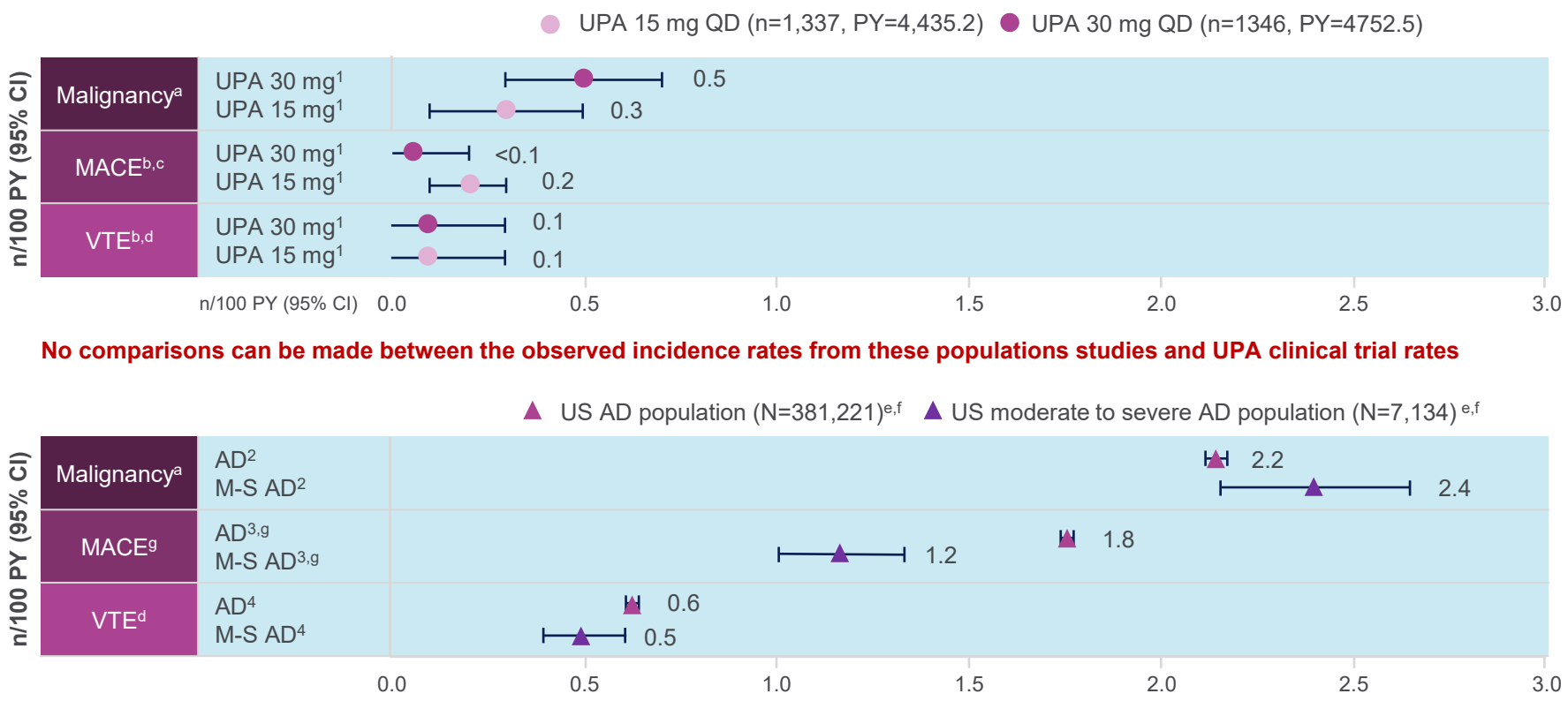
Long-term rates of malignancy,[a] MACE[b] and VTE[b] with JAKis generally reflect background rates in the general AD population[1–4]



No comparisons can be made between the observed incidence rates from these populations studies and UPA clinical trial rates

Limitations:

Variability across data sources exists and observational data may potentially overestimate risk, as the results may be influenced by confounding factors including, but not limited to:

- Outcomes as defined by diagnostic codes, may be subject to measurement error (limited sensitivity or specificity) versus RCT case adjudication
- Patient heterogeneity (age/gender/geographical location)
- Variability in the distribution of risk factors (comorbidities and medication use)

[a]Excluding NMSC. [b]Adjudicated. [c]MACE was defined as cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke. [d]VTE was defined as deep vein thrombosis and/or pulmonary embolism. [e]In a real-world U.S. Optum claims analysis, patients with AD were defined by ICD-10 codes; moderate to severe AD were defined by dupilumab use as a proxy at any time during the follow-up period from 2017–2023. [f]Patients included in the Optum Clinformatics Data Mart cohort were not treated with upadacitinib. [g]MACE was defined as non-fatal myocardial infarction and non-fatal stroke with inpatient length of stay of ≥1 day.

AD, atopic dermatitis; CI, confidence interval; JAK, Janus kinase; JAKi, JAK inhibitor; MACE, major adverse cardiovascular events; M-S, moderate to severe; n/100PY, the number of patients with at least 1 event per 100PY; NMSC, nonmelanoma skin cancer; PY, patient-years; QD, once daily; RCT, randomised controlled trial; UPA, upadacitinib; VTE, venous thromboembolism.

1. Bunick C, et al. Revolutionizing Atopic Dermatitis (RAD); Virtual conference, 8 December 2024. Poster DV# 013407; 2. Vleugels RA, et al. Revolutionizing Alopecia Areata, Vitiligo, and Eczema (RAVE), Chicago, IL, USA, 8–10 June, 2024. Poster; 3. Bunick C, et al. The RAVE Conference, Chicago, IL, USA, 8–10 June, 2024. Poster; 4. Bunick C, et al. AAD 2025 Annual Meeting, Orlando, FL, USA, 7–11 March, 2025. Poster DV# 013157.

Rates of malignancy,[a] MACE[b] and VTE[b] were reflective of the background rate for the AD population

Incidence rate per 100 PY (95% CI)	Upadacitinib 15 mg QD n=1,337 (PY=3,823)[1]	Upadacitinib 30 mg QD n=1,346 (PY=4,077)[1]	Abrocitinib 100 mg QD n=1,023 (PY=1,507)[2]	Abrocitinib 200 mg QD n=1,981 (PY=2,173)[2]	Baricitinib 2 mg QD n=584 (PY=727)[3]	Baricitinib 4 mg QD n=497 (PY=800)[3]	AD general population
Malignancy, excluding NMSC	0.3 (0.1, 0.5)	0.4 (0.2, 0.7)	0.2 (0.0, 0.4)	0.3 (0.2, 0.6)	0,3	0	0.33 (0.30, 0.36)[c 4] [N=66,258]
Adjudicated MACE	0.2 (0.1, 0.3)	<0.1 (0.0, 0.2)	0.3 (0.1, 0.7)	0.3 (0.1, 0.5)	0,1	0,1	0.63 (0.51, 0.78)[d 5] [N=2,527]
Adjudicated VTE	0.1 (0.0, 0.3)	0.1 (0.1, 0.3)	0.1 (0.0, 0.3)	0.3 (0.1, 0.5)	0	0,2	0.31 (0.29, 0.34)[e 6] [N=113,927]

These results are based on data taken from individual clinical trials and are not suitable for direct comparison. Therefore, treatment differences cannot be regarded as statistically significant.
Data are from content presented at scientific meetings and have not been published in a peer reviewed publication.

[a]Excluding NMSC; [b]Adjudicated; [c]N=66,258, UK patients of all ages with mild-to-severe AD, patients with AD were identified by the presence of at least 2 correlative codes of AD, or by the presence of AD codes entered by a specialist; [d]N=2,527, all Danish citizens 15 years of age or older with moderate-to-severe AD, moderate/severe AD was identified using systemic therapy for AD as a proxy measure including azathioprine, methotrexate, cyclosporine, and/or mycophenolate mofetil; [e]N=113,927, US adults (≥18 years of age) with moderate-to-severe AD, moderate-to-severe AD was identified using prescription dispensing as a proxy measure, including high- or ultra-high-potency topical corticosteroids, systemic corticosteroids, systemic immunosuppressants, phototherapies, or biologics used at any time after AD diagnosis (including index date).

AD, atopic dermatitis; CI, confidence interval; PY, patient years; MACE, major adverse cardiovascular event; NMSC, non-melanoma skin cancer; QD, once daily; VTE, venous thromboembolism.

1. Bunick C, et al. *Revolutionizing Atopic Dermatitis (RAD)*, Virtual, 10 December 2023. Oral; 2. Simpson EL, et al. *Am J Clin Dermatol* 2024;25(4):639–654; 3. Bieber T, et al. *J Dermatol Ther.* 2023;34(1):2161812; 4. Arana A, et al. *BJD*. 2010;163:1036–43; 5. Anderson YMF, et al. *J Allergy Clin Immunol*. 2016;138(1):310–12; 6. Meyers KJ, et al. *Dermatol Ther (Heidelb)*. 2021;11:1041–52.

Long-term cross-indication safety data for upadacitinib comprising data from 16 studies and over 27,000 patient-years of exposure: (AD, RA, PsA, AS, nr-axSpA, UC and CD)[1]

	AD		RA	PsA	AS	nr-axSpA	UC		CD	
	3 Phase III trials in adolescent and adult		6 Phase III trials	2 Phase III trials	1 Phase II/III trial and 1 Phase III trial	1 Phase III trial	1 Phase III trial		1 Phase II and 3 Phase III trials *Maintenance treatment*	
Long-term exposure AESI E/100 PYs[c] (As of August 2024)	**Any UPA 15 (n=1337, PY=4,435.2)**	**Any UPA 30[a] (n=1346, PY=4,752.5)**	**Any UPA 15 (n=3209, PY=12,315.8)**	**Any UPA 15 (n=907, PY=2,971.7)**	**Any UPA 15 (n=596, PY=1015.3)**	**Any UPA 15 (n=286, PY=380.7)**	**Any UPA 15 (n=285, PY=717.9)**	**Any UPA 30[b] (n=291, PY=858.2)**	**Any UPA 15 (n=221, PY=387.2)**	**Any UPA 30[b] (n=771 PY=1,714.9)**
Infections										
Serious infections	2.2	2.6	3.5	3.3	2.5	1.3	2.9	4.1	3.4	6.0
Active TB	<0.1	<0.1	<0.1	0	0	0	0	0	0	<0.1
Opportunistic infection excl. TB, herpes zoster	1.6	2.0	0.3	0.3	0.2	0.3	0.4	0.5	0.5	0.3
Herpes zoster	3.2	5.2	3.1	3.1	3.2	2.6	4.6	6.9	2.3	4.8
Mortality										
Death	<0.1	0.1	0.8	0.6	<0.1	0	0.1	0.1	0.3	0.1
Malignancy[d]										
Malignancy (excluding NMSC)	0.3	0.5	0.7	0.8	0.2	0.3	0.7	0.5	0.8	0.9
Lymphoma[e]	<0.1	<0.1	<0.1	0.1[d]	<0.1[d]	0.3	0	0	0	0.1
NMSC	0.4	0.4	0.4	0.7	0.3	0.3	0	1.1	0	0.6
Cardiovascular events										
Adjudicated VTE	0.1	0.1	0.4	0.2	0.3	0.8	0.6	0.6	0	0.2
Adjudicated MACE	0.2	<0.1	0.4	0.4	0.2	0.5	0.1	0.4	0	0.2
Gastroenterological events										
Adjudicated GI perforations	0	<0.1	<0.1	0.1	0	0	0	0	0.8	0.5

Adverse reaction rates observed in clinical trials and long-term extension studies may not predict rates observed in clinical practice.

[a]UPA 30 mg may be considered for appropriate patients aged <65 years who have an inadequate response to UPA 15 mg. Review the full Prescribing Information for more details; [b]UPA 30 mg may be considered for patients with refractory, severe, or extensive disease.

[c]Data shown are in n/100 PYs; [d]Excluding nonmelanoma skin cancer; [e]Reported as abnormal lymphocyte morphology and not confirmed to be lymphoma.

AD, atopic dermatitis; AESI, adverse events of special interest; AS, ankylosing spondylitis; CD, Crohn's disease; E/100 PY, events per 100 patient-years; GI, gastrointestinal; MACE, major adverse cardiovascular event; NMSC, non-melanoma skin cancer; nr-axSpA, non-radiographic axial spondyloarthritis; PsA, psoriatic arthritis; PY, patient year; RA, rheumatoid arthritis; TB, tuberculosis; UC, ulcerative colitis; UPA, upadacitinib; VTE, venous thromboembolism.

1. Burmester GR, et al. *Adv Ther.* 2025; doi:10.1007/s12325-025-03328-y. [Online ahead of print].

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JAK inhibitors demonstrate long-term efficacy, quality of life benefits, and well characterised safety profile in patients with moderate to severe AD

JAK inhibition has shown efficacy in reducing **skin (EASI 90)** and **itch (WP-NRS 0/1)** symptoms in patients with moderate to severe AD[1–5]

Achieving **simultaneous itch and skin symptom** resolution **(Minimal Disease Activity [MDA])** has shown significant impact in improving the **QoL** for patients with AD[6–8]

Rates of **AESI remained low with JAKis for up to 6 years** and rates of malignancy, MACE and VTE were **reflective of the background rate** for the AD population[9–14]

AD, atopic dermatitis; AESI, adverse events of special interest; EASI, Eczema Area and Severity Index; JAK, Janus kinase; MACE, major adverse cardiovascular events; QoL, quality of life; VTE, venous thromboembolism; WP-NRS, Worst Pruritus Numerical Rating Scale.

1. Silverberg J, et al. Revolutionising Atopic Dermatitis (RAD). June 2024, Chicago IL, USA. Abstract 734; 2. Irvine AD, et al. Revolutionizing Atopic Dermatitis (RAD) 2024 Virtual Meeting, 8 Dec 2024. Oral presentation DV-013377; 3. Reich K, et al. Revolutionizing Atopic Dermatitis (RAD) 2021 Virtual conference, 11–13 Dec 2021. Oral P681; 4. Reich K, et al. Lancet. 2022;400(10348):273–82; 5. Silverberg JI, et al. American Academy of Dermatology, San Diego, CA, USA, 8–12 March 2024. Oral 53959; 6. Silverberg JI, et al. American Academy of Dermatology, San Diego, CA, USA, 8–12 March 2024. Oral 53959; 7. Silverberg JI, et al. 2025 American Academy of Dermatology Annual Meeting (AAD 2025), 7–11 March, 2025, Orlando, FL, USA. Poster 63852; 8. Silverberg JI, et al. Dermatol Ther (Heidelb). 2025;15(8):2255–73; 9. Bunick C, et al. Revolutionizing Atopic Dermatitis (RAD). Virtual conference. December 2024. Poster; 10. Bunick C, et al. Revolutionizing Atopic Dermatitis (RAD); Virtual conference, 8 December 2024. Poster DV# 013407; 11. Vleugels RA, et al. Revolutionizing Alopecia Areata, Vitiligo, and Eczema (RAVE), Chicago, IL, USA, 8–10 June, 2024. Poster; 12. Bunick C, et al. The RAVE Conference, Chicago, IL, USA, 8–10 June, 2024. Poster; 13. Bunick C, et al. AAD 2025 Annual Meeting, Orlando, FL, USA, 7–11 March, 2025. Poster DV# 013157; 14. Burmester GR, et al. Adv Ther. 2025; doi:10.1007/s12325-025-03328-y. [Online ahead of print].