

SUPPLEMENTARY MATERIAL

Upadacitinib Rapidly Improves Patient-Reported Outcomes in Atopic Dermatitis: 16-Week Results from Phase 3 Clinical Trials (Measure Up 1 and 2)

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Supplementary Material Table 1 Institutional review boards and ethics committees for the Measure Up 1 and Measure Up 2 studies

Name	Number
Measure Up 1 Study	
Advarra	REC-0000044274, REC-0000044275, REC-0000044276, REC-0000044305, REC-0000071569, REC-0000071473, REC-0000069722, REC-0000069719, REC-0000069721, REC-0000069720, REC-0000069447, REC-0000069477, REC-0000069443, REC-0000069478, REC-0000069465, REC-0000069449, REC-0000069453, REC-0000069455, REC-0000069459, REC-0000069446, REC-0000069468, REC-0000069438, REC-0000069442, REC-0000069672, REC-0000069475, REC-0000069440, REC-0000069476, REC-0000069439, REC-0000069458, REC-0000069441, REC-0000069450, REC-0000069461, REC-0000069451, REC-0000069677, REC-0000069463, REC-0000069445, REC-0000069462, REC-0000069467, REC-0000069686, REC-0000069457, REC-0000069448, REC-0000032127, REC-0000032126, REC-0000031426, REC-0000031425, REC-0000039714, REC-0000032314, REC-0000032328, REC-0000032341, REC-0000035711, REC-0000034001, REC-0000032311, REC-0000032310, REC-0000032347, REC-0000032317, REC-0000032355, REC-0000033715, REC-0000040222, REC-0000036395, REC-0000032349, REC-0000033925, REC-0000032331, REC-0000032322, REC-0000032315, REC-0000032321, REC-0000032327, REC-0000032323, REC-0000052342, REC-0000032305, REC-0000035743, REC-0000034331, REC-0000032345, REC-0000032330, REC-0000032343, REC-0000045997, REC-0000032457, REC-0000032337, REC-0000032326, REC-0000032338, REC-0000032332, REC-0000032339, REC-0000032325, REC-0000032336, REC-0000032324, REC-0000032313, REC-0000032354, REC-0000032312, REC-0000032353, REC-0000045980, REC-0000036063, REC-0000032333, REC-0000032329, REC-0000032340, REC-0000032356, REC-0000039143, REC-0000038962, REC-0000052339, REC-0000032915, REC-0000038961, REC-0000032351, REC-0000032316, REC-0000031438
Aichi Medical University Hospital IRB	REC-0000028026
Bellberry Limited Human Research Ethics Committee	REC-0000048968, REC-0000051199, REC-0000048964, REC-0000051198, REC-0000048966, REC-0000048967, REC-0000048965
Bioethics Committee of Beijing Friendship Hospital, Capital Medical University	REC-0000069889
Brany IRB	REC-0000027127

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Name	Number
Central Ethics Committee	REC-0000024111, REC-0000024110, REC-0000024108, REC-0000024109, REC-0000045743, REC-0000024112, REC-0000029994
Clinical Trial Ethics Committee of The Third Affiliated Hospital of Sun Yat-Sen	REC-0000035919
Comisia Nationala de Bioetica a Medicamentului si a Dispozitivelor Medicale	REC-0000039740, REC-0000039741, REC-0000039739
Comitato Etico Catania 1	REC-0000033421, REC-0000067719
Comitato Etico Dell Universita Federico li	REC-0000033441
Comitato Etico di Area Vasta Emilia Centro	REC-0000033424
Comitato Etico Indipendente Fondazione PTV Policlinico Tor Vergata	REC-0000033418
Comitato Etico Regionale Area Vasta Nord Ovest	REC-0000033446
Comitato Etico Regionale delle Marche	REC-0000033416, REC-0000033415
Comitato Etico Regione Toscana - Area Vasta Nord Ovest	REC-0000067720
Comitato Etico Universita Federico II – Aorn A. Cardarelli	REC-0000067718
Comite de Etica de la Investigacion Fundacion Hospitalaria San Vicente de Paul	REC-0000022550
Comite de Etica e Investigacion IPS Universitaria	REC-0000049315
Comite de etica en investigacion Clinisalud del Sur	REC-0000046846

Supplementary Material Table 1 Institutional review boards and ethics committees for the Measure Up 1 and Measure Up 2 studies

Name	Number
Comite de Etica en Investigacion de la Empresa Social del Estado Hospital Mental	REC-0000022545
Comite de Etica en Investigacion en el Area de la Salud de Universidad del Norte	REC-0000022547
Comite de Etica Framingham	REC-0000025718
Comité de protection des Personnes Sud Est III	REC-0000034728
Comite de Revision de estudios de Investigacion	REC-0000022546
Comite Independiente de Etica para Ensayos en Farmacologia Clinica - FEFyM	REC-0000025756, REC-0000025755
CPP Sud-Est III	REC-0000067920
EC at ME Rivne Regional Dermatology and Venereology Dispensary of RRC	REC-0000040524
Erciyes University Medical Faculty Clinical Trials Ethics Committee	REC-0000052325
Ethic Committee of Clinical Center University of Sarajevo	REC-0000035985
Ethics Committee of Peking University People's Hospital	REC-0000030711
Ethic Committee of the University Clinical Centre of The Republic of Sprska	REC-0000026799, REC-0000073144, REC-0000036554
Ethics Committee for Clinical Trials	REC-0000028511
Ethics Committee for Medicinal products	REC-0000061828, REC-0000061827, REC-0000061826, REC-0000061825
Ethics committee Medical Science Research of Peking University Third Hospital	REC-0000030712

Supplementary Material Table 1 Institutional review boards and ethics committees for the Measure Up 1 and Measure Up 2 studies

Name	Number
Ethics Committee of Beijing Friendship Hospital Capital Medical University	REC-0000033354
Ethics Committee of Huashan Hospital, Fudan University	REC-0000030812
Ethics Committee of Ruijin Hospital Shanghai Jiaotong University School of Medc	REC-0000033378
Ethics Committee of Sun Yat-sen Memorial Hospital of Sun Yat-sen University	REC-0000034145
Ethics Committee of The First Hospital of China Medical University	REC-0000030805
Ethics Committee record of Union Hospital Huazhong University of Science and Tec	REC-0000034165
Ethics Committee University Clinical Center Tuzla	REC-0000045273
Ethics Counsel at the Ministry of Health of the Russian Federation	REC-0000025105
Ethikkommission der MHH	REC-0000039916, REC-0000039914, REC-0000039913, REC-0000039876, REC-0000039915, REC-0000039917, REC-0000035541, REC-0000039920, REC-0000039918, REC-0000039919, REC-0000030964
Ethikkommission Nordwest- und Zentralschweiz	REC-0000027430, REC-0000027427, REC-0000027429, REC-0000027428, REC-0000036097, REC-0000027426
Fukuoka University Hospital Institutional Review Board	REC-0000028602
Gifu University Hospital Institutional Review Board	REC-0000021781
Hacettepe Universitesi Tip Fakultesi Klinik Arastirmalar Etik Kurulu	REC-0000033641, REC-0000033640, REC-0000033642, REC-0000033639, REC-0000033643
Hamilton Integrated Research Ethics Board	REC-0000021837
Health and Disability Ethics Committees	REC-0000035806, REC-0000035805, REC-0000069825, REC-0000069826

Supplementary Material Table 1 Institutional review boards and ethics committees for the Measure Up 1 and Measure Up 2 studies

Name	Number
Health Research Ethics Board	REC-0000022531
Health Research Ethics Board of Alberta	REC-0000028056, REC-0000028052
Henry Ford Health System Institutional Review Board	REC-0000027170
Horizon Health Network Research Ethics Board	REC-0000025045
IEC of The Second Affiliated Hospital Zhejiang University School of Medicine	REC-0000033503
Independent Ethics Committee of SBIoH CDD	REC-0000023859
Joint Institutional Review Board	REC-0000027403
Kyushu Central Hospital of the Mutual Aid Association of Public School Teachers	REC-0000027535
LEC of CI Zaporizhzhya Regional Skin and Venereal Clinical Dispensary of ZRC	REC-0000040525
LEC of Military Hospital Military Unit A3309	REC-0000050580
Local Ethics Committee at Ural Research Institute of DV and Immunopathology	REC-0000022232
Local Ethics Committee of Chelyabinsk Regional Clinical Dermatovenerologic Dispensary	REC-0000022155
Local Ethics committee of NMRC of Children's Health of the MoH of the RF	REC-0000024578
Local Ethics Committee of Saratov State Medical University n.a. V.I. Razumovskiy	REC-0000022422
London-London Bridge Research Ethics Committee	REC-0000027671, REC-0000030736, REC-0000030750, REC-0000030754, REC-0000030753, REC-0000030748

Supplementary Material Table 1 Institutional review boards and ethics committees for the Measure Up 1 and Measure Up 2 studies

Name	Number
Medical Corporation Kojinkai Sapporo Skin Clinic IRB	REC-0000027425, REC-0000027424
Medical Research and Ethics Committee	REC-0000035628, REC-0000032275, REC-0000032274, REC-0000032276
Northwestern University IRB Office, Biomedical IRB	REC-0000033858
NTT Medical Center Tokyo Institutional Review Board	REC-0000022544
Ogaki Municipal Hospital Institutional Review Board	REC-0000027032
Oregon Health and Science University, Research Integrity Office	REC-0000022720
Quorum Review IRB	REC-0000052340, REC-0000052341, REC-0000027794, REC-0000024926, REC-0000026266, REC-0000025762, REC-0000026394, REC-0000025421, REC-0000026323, REC-0000028475, REC-0000025418, REC-0000026844, REC-0000025414, REC-0000025794, REC-0000028400, REC-0000032120, REC-0000032125, REC-0000025771, REC-0000026267, REC-0000028401, REC-0000027099, REC-0000028547, REC-0000026912, REC-0000025764, REC-0000025195
Research Ethics Committee of National Institute for Health Development	REC-0000041721, REC-0000041720, REC-0000041719, REC-0000041718
Research Review Board Inc	REC-0000028132, REC-0000028112, REC-0000028109, REC-0000028133, REC-0000028134, REC-0000025833
The National Committee on Health Research Ethics	REC-0000027193, REC-0000027192, REC-0000027191, REC-0000027194
University Hospital Kyoto Prefectural University of Medicine IRB	REC-0000027404
University of Manitoba Research Ethics - Bannatyne	REC-0000028057
University of Pennsylvania Institutional Review Board	REC-0000040002
University of Yamanashi Hospital, IRB	REC-0000027926

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Name	Number
Varsinais-Suomen Sairaanhoitopiirin Eettinen Toimikunta	REC-0000025019, REC-0000026246, REC-0000026249, REC-0000026248
Yaizu City Hospital Institutional Review Board	REC-0000027539
Measure Up 2 Study	
Advarra	REC-0000044383, REC-0000044473, REC-0000046347, REC-0000046348, REC-0000047395, REC-0000046820, REC-0000046140, REC-0000048013, REC-0000046101, REC-0000047010, REC-0000046945, REC-0000046991, REC-0000046346, REC-0000046932, REC-0000053767, REC-0000053723, REC-0000053796, REC-0000053794, REC-0000053772, REC-0000053781, REC-0000053770, REC-0000053759, REC-0000053719, REC-0000053717, REC-0000053779, REC-0000053792, REC-0000053765, REC-0000053799, REC-0000053773, REC-0000053782, REC-0000053797, REC-0000053721, REC-0000053795, REC-0000053790, REC-0000044380, REC-0000044381, REC-0000046139, REC-0000050399, REC-0000049844, REC-0000053730, REC-0000053715, REC-0000053720, REC-0000053731, REC-0000053735, REC-0000053734, REC-0000053728, REC-0000053732, REC-0000053778, REC-0000053785, REC-0000053788, REC-0000053713, REC-0000053768, REC-0000053793, REC-0000053714, REC-0000053798, REC-0000053763, REC-0000053777, REC-0000053718, REC-0000053762, REC-0000053716, REC-0000053764, REC-0000053776
Bellberry Limited Human Research Ethics Committee	REC-0000051229, REC-0000051228, REC-0000051230
Ce Della Fondazione Pol. Univ. A. Gemelli Irccs Univ. Cattolica Del Sacro Cuore	REC-0000067726, REC-0000064036
Comissão de Ética para a Investigação Clínica	REC-0000029197, REC-0000029195, REC-0000029194, REC-0000029193, REC-0000029196, REC-0000036809, REC-0000028606
CEIC Hospital General Universitario Gregorio Marañon-Area 1	REC-0000045923, REC-0000029530, REC-0000039673, REC-0000039675, REC-0000039674, REC-0000029529, REC-0000029527, REC-0000029525, REC-0000029526, REC-0000029528, REC-0000029524, REC-0000045924, REC-0000045909, REC-0000067620

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Name	Number
Central Ethics Committee	REC-0000024120, REC-0000024117, REC-0000030030, REC-0000030031, REC-0000030032, REC-0000037094, REC-0000024116, REC-0000024118
Centralised Institutional Review Board	REC-0000027952, REC-0000027951, REC-0000027949, REC-0000027947, REC-0000027950, REC-0000027948
Chang Gung Medical Foundation Institutional Review Board	REC-0000028459, REC-0000028458
Clinical Research Ethics Committee of Cork Teaching Hospitals	REC-0000027496, REC-0000027493, REC-0000027494, REC-0000027495, REC-0000035989
Comitato Etico Centrale Irccs - Sezione Ifo-Fondazione Bietti	REC-0000033478
Comitato Etico della Fondazione A. Gemelli Università Cattolica del Sacro Cuore	REC-0000033483, REC-0000033482
Comitato Etico di Brescia	REC-0000067727
Comitato Etico Indipendente AOU di Cagliari	REC-0000033498
Comitato Etico per le province di L'Aquila e Teramo	REC-0000033479, REC-0000067728
Comitato Etico Provinciale della Provincia di Brescia	REC-0000033474
Comitato Etico Territoriale Lombardia 3	REC-0000033481
Comité d'éthique hospitalo-facultaire	REC-0000031739, REC-0000035524, REC-0000034127, REC-0000039868
Comite de Protection des Personnes Ile de France III	REC-0000067913, REC-0000035620
Egeszsegügyi Tudományos Tanács Klinikai Farmakológiai Etikai Bizottság	REC-0000046061, REC-0000046046, REC-0000039174, REC-0000039177, REC-0000039178, REC-0000039175, REC-0000039180, REC-0000039176, REC-0000039179
Ethics Committee for Clinical Trials	REC-0000024559, REC-0000025157, REC-0000035893, REC-0000037245

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Name	Number
Ethikkommission der Stadt Wien	REC-0000032040, REC-0000032039, REC-0000032548, REC-0000035894, REC-0000032041
Ethikkommission der Universitaet zu Luebeck	REC-0000067514, REC-0000031348, REC-0000039939, REC-0000039936, REC-0000039934, REC-0000039931, REC-0000035540, REC-0000039935, REC-0000039938, REC-0000039933, REC-0000039937
Eticka komise Fakultni nemocnice v Motole	REC-0000046142
Eticka komise Krajske zdravotni - Masarykovy nemocnice v Usti nad Labem	REC-0000032599
Eticka komise VFN v Praze	REC-0000032555, REC-0000032551, REC-0000032554
Eticka komise Vseobecne fakultni nemocnice v Praze	REC-0000068058, REC-0000068115
Hallym University Kangnam Sacred Heart Hospital Institutional Review Board	REC-0000036706, REC-0000067455
Health and Disability Ethics Committees	REC-0000033561, REC-0000033560, REC-0000072706
Health Research Ethics Authority	REC-0000028629
Health Research Ethics Board of Alberta Clinical Trials Committee	REC-0000030226, REC-0000031998
Health Sciences IRB	REC-0000032085
Institutional Review Board Korea University Ansan Hospital	REC-0000036704
Institutional Review Board of Ajou University Hospital	REC-0000036557
Institutional Review Board of Chung-Ang University Hospital	REC-0000067645, REC-0000039435
Institutional Review Board of Soon Chun Hyang University Hospital Bucheon	REC-0000034523, REC-0000071775, REC-0000071775

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Name	Number
Institutional Review board of The Catholic University of Korea Incheon Hospital	REC-0000038046
Joint Institutional Review Board, Taipei Medical University	REC-0000028462
Lokální etická komise FN Plzeň	REC-0000032598
London Bridge Research Ethics Committee	REC-0000068913
METC UMCG	REC-0000034030
National Organization of Medicines and National Ethics Committee	REC-0000024711, REC-0000026691, REC-0000026686, REC-0000025329, REC-0000026454
Quorum Review IRB	REC-0000040647, REC-0000042006, REC-0000025142, REC-0000039653, REC-0000039711, REC-0000032610, REC-0000026897, REC-0000034575, REC-0000027857, REC-0000032607, REC-0000035862, REC-0000026956, REC-0000032079, REC-0000027594, REC-0000032269, REC-0000027165, REC-0000032608, REC-0000032538, REC-0000028548, REC-0000031205, REC-0000029345, REC-0000030667, REC-0000031005, REC-0000032005, REC-0000032254, REC-0000035864, REC-0000034351, REC-0000034649, REC-0000034639, REC-0000035111, REC-0000036201, REC-0000037397, REC-0000036407, REC-0000035858, REC-0000034260, REC-0000034238, REC-0000039847, REC-0000039848, REC-0000040189, REC-0000040292, REC-0000040299, REC-0000027417, REC-0000032270, REC-0000032609, REC-0000028451, REC-0000028567, REC-0000028537, REC-0000028482, REC-0000032137, REC-0000032881, REC-0000028538, REC-0000035850, REC-0000035832, REC-0000034769, REC-0000034390, REC-0000034258, REC-0000033838, REC-0000034757, REC-0000032536, REC-0000032211, REC-0000037334, REC-0000036791, REC-0000044915
Research Ethics Committee National Taiwan University Hospital	REC-0000068208, REC-0000028456
Research Review Board Inc	REC-0000041394, REC-0000051818, REC-0000051816, REC-0000051813, REC-0000051815, REC-0000034968, REC-0000034967, REC-0000028203, REC-0000032130, REC-0000034969, REC-0000034965

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Name	Number
Royal Children's Hospital HREC	REC-0000032466, REC-0000032463, REC-0000032465, REC-0000032464, REC-0000046175
Seoul National University Hospital Institute Review Board	REC-0000036705
South Central – Berkshire REC	REC-0000055740, REC-0000055738, REC-0000055737, REC-0000055739, REC-0000055735, REC-0000055736
The Institutional Review Board Chung Shan Medical University Hospital	REC-0000028460
The National Committee on Health Research Ethics	REC-0000027197, REC-0000027195, REC-0000027196
UBC Clinical Research Ethics Board	REC-0000034514
UCSD Human Research Protections Program	REC-0000034048
University of Southern California Institutional Review Board	REC-0000060510
Western Institutional Review Board	REC-0000032144

Supplementary Material Table 2 Symptoms assessed by patient-reported outcomes and associated predefined minimal clinically important difference and minimal disease burden score thresholds

Patient-reported outcome	Symptom/concept assessed	Score range	Minimal clinically important difference (improvement)	Analysis type	Minimal disease burden score ^b	Analysis type
WP-NRS ^a	Itch	0–10	≥ 4 ^c	Predefined	0/1	Predefined
ADerm-IS Sleep ^a	Sleep	0–30	≥ 12 ^d	Predefined	0–3	Post hoc
ADerm-IS Daily Activities	QoL	0–40	≥ 14 ^d	Predefined	0–2	Post hoc
ADerm-IS Emotional State	QoL	0–30	≥ 11 ^d	Predefined	0–2	Post hoc
ADerm-SS Skin Pain ^a	Skin pain	0–10	≥ 4 ^d	Predefined	0/1	Post hoc
ADerm-SS TSS-7	Skin pain and other symptoms	0–70	≥ 28 ^d	Predefined	0–11	Post hoc
POEM Total	Skin pain and other symptoms	0–28	≥ 4 ^d	Predefined	0–2	Post hoc
POEM Sleep	Sleep	0–4	N/A	N/A	0	Predefined
DLQI	QoL	0–30	≥ 4 ^d	Predefined	0/1 ^d	Predefined
CDLQI	QoL	0–30	N/A	N/A	0/1	Predefined
HADS-A	Anxiety	0–21	N/A	N/A	< 8 ^e	Predefined
HADS-D	Depression	0–21	N/A	N/A	< 8 ^e	Predefined
PGIS	Impression of severity	0 (absent) – 6 (very severe)	N/A	N/A	“Absent” or “minimal” (0/1)	Predefined
PGIC	Impression of change	0 (very much improved) – 6 (very much worse)	N/A	N/A	“Much improved” or “very much improved” (0/1)	Predefined
PGIT	Impression of treatment	0 (Extremely dissatisfied) – 6 (extremely satisfied)	N/A	N/A	“Very satisfied” or “extremely satisfied” (0/1)	Predefined

ADerm-IS Atopic Dermatitis Impact Scale, *ADerm-SS* Atopic Dermatitis Symptom Scale, *CDLQI* Children's Dermatology Life Quality Index, *DLQI* Dermatology Life Quality Index, *HADS* Hospital Anxiety and Depression Scale, *HADS-A* HADS Anxiety, *HADS-D* HADS Depression, *N/A* not applicable, *PGIC* Patient Global Impression of Change, *PGIS* Patient Global Impression of Severity, *PGIT* Patient Global Impression of Treatment, *POEM* Patient-Oriented Eczema Measure, *PROs* patient-reported outcomes, *QoL* quality of life, *TSS-77*-item total symptom score, *WP-NRS* Worst Pruritus Numerical Rating Scale

WP-NRS, *ADerm-SS*, and *ADerm-IS* were assessed via electronic handheld devices at home, while other *PROs* were assessed at select weekly visits through the 16-week double-blind period

^aEndpoints were assessed daily, with the weekly average used for the analyses in this report. Values were rounded to the nearest integer when determining the achievement of the minimal disease burden threshold score

^bDefined as "absent" or "minimal" symptoms (*WP-NRS*, *ADerm-SS*) or impact on *QoL* (*ADerm-IS*), "clear" or "almost clear" (*POEM* Total), "no days" of sleep disturbance in the past week (*POEM* Sleep), "no effect at all on patient's life" (*DLQI*, *CDLQI*), and within normal levels of anxiety and depression (*HADS-A*, *HADS-D*). Scores were rounded to the nearest integer

^c Multiplicity-controlled endpoint within the Measure Up 1 and Measure Up 2 trials at weeks 1, 4, and 16

^d Multiplicity-controlled endpoint within the Measure Up 1 and Measure Up 2 trials at week 16

^e Multiplicity-controlled endpoint within the Measure Up 1 and Measure Up 2 trials at week 16 for the achievement of both *HADS-A* scores < 8 and *HADS-D* scores < 8

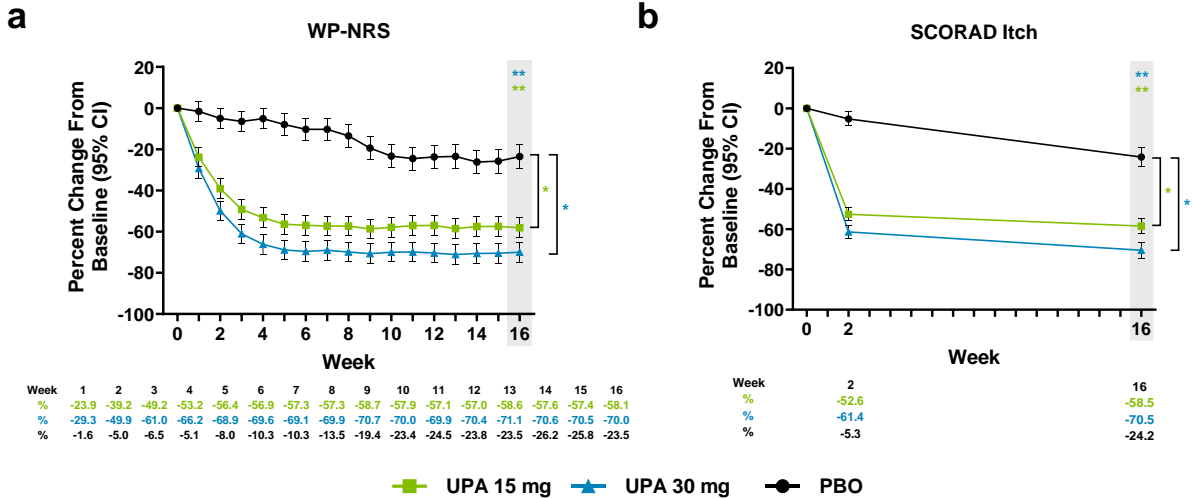
Supplementary Material Table 3 Change from baseline in PROs during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies (MMRM)

PRO, LS mean change (95% CI)	Week	UPA 15 mg	UPA 30 mg	PBO	Nominal statistical significance versus PBO	
					UPA 15 mg	UPA 30 mg
WP-NRS	1	-1.7 (-1.9, -1.6)	-2.1 (-2.3, -2.0)	-0.2 (-0.3, 0)	***	***
	16	-4.1 (-4.3, -3.9)	-5.0 (-5.2, -4.8)	-1.6 (-1.9, -1.4)	***	***
ADerm-SS Skin Pain	1	-1.8 (-2.0, -1.6)	-2.1 (-2.3, -2.0)	-0.2 (-0.4, -0.1)	***	***
	16	-4.0 (-4.2, -3.7)	-4.8 (-5.0, -4.5)	-1.7 (-1.9, -1.4)	***	***
ADerm-SS TSS-7	1	-16.0 (-17.4, -14.7)	-19.5 (-20.8, -18.1)	-1.7 (-3.0, -0.4)	***	***
	16	-28.7 (-30.3, -27.1)	-33.8 (-35.3, -32.2)	-12.3 (-14.2, -10.4)	***	***
POEM Total	2	-10.9 (-11.4, -10.3)	-12.9 (-13.5, -12.3)	-2.1 (-2.7, -1.5)	***	***
	16	-12.1 (-12.8, -11.4)	-14.9 (-15.5, -14.2)	-4.4 (-5.2, -3.5)	***	***
ADerm-IS Sleep	1	-5.1 (-5.6, -4.6)	-6.2 (-6.7, -5.7)	-0.4 (-0.9, 0.1)	***	***
	16	-11.6 (-12.3, -10.9)	-13.7 (-14.4, -13.0)	-4.4 (-5.2, -3.6)	***	***
DLQI	2	-9.0 (-9.6, -8.3)	-10.2 (-10.8, -9.6)	-2.1 (-2.8, -1.5)	***	***
	16	-10.2 (-10.9, -9.6)	-11.8 (-12.5, -11.2)	-4.5 (-5.3, -3.7)	***	***
CDLQI	2	-7.7 (-9.1, -6.4)	-9.9 (-11.4, -8.5)	-3.8 (-5.2, -2.4)	***	***
	16	-9.0 (-10.7, -7.3)	-11.8 (-13.7, -10.0)	-3.7 (-5.9, -1.6)	***	***
ADerm-IS Emotional State	1	-9.8 (-10.5, -9.1)	-11.8 (-12.5, -11.1)	-1.7 (-2.4, -1.0)	***	***
	16	-12.9 (-13.7, -12.1)	-15.0 (-15.8, -14.2)	-5.8 (-6.7, -4.8)	***	***
ADerm-IS Daily Activities	1	-7.8 (-8.6, -6.9)	-9.5 (-10.3, -8.6)	-0.8 (-1.6, -0.1)	***	***
	16	-15.4 (-16.4, -14.5)	-17.4 (-18.3, -16.4)	-6.9 (-8.0, -5.8)	***	***

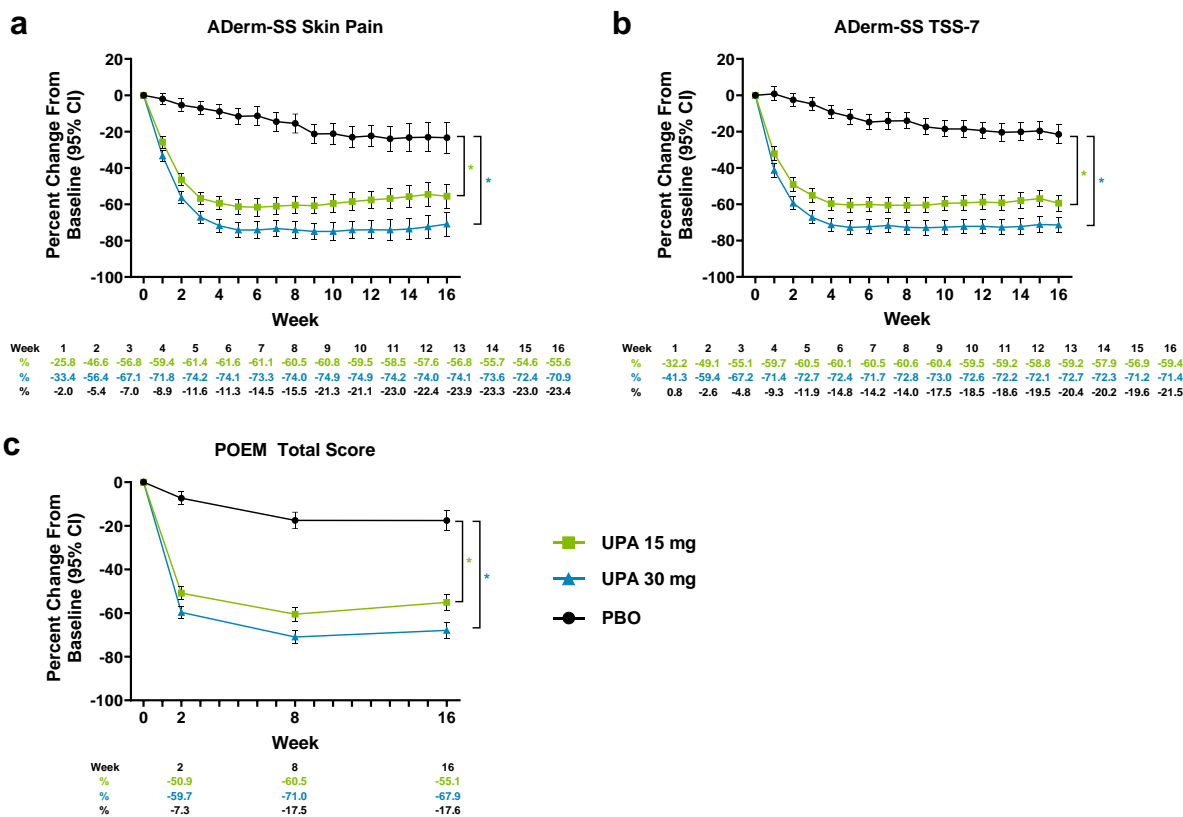
ADerm-IS Atopic Dermatitis Impact Scale, *ADerm-SS* Atopic Dermatitis Symptom Scale, *CDLQI* Children's Dermatology Life Quality Index, *CI* confidence interval, *DLQI* Dermatology Life Quality Index, *LS*, least squares; *MMRM* mixed-effect model repeat measurement, *PBO* placebo, *POEM* Patient-Oriented Eczema Measure, *PROs* patient-reported outcomes, *UPA* upadacitinib, *TSS-7* 7-item total symptom score, *WP-NRS* Worst Pruritus Numerical Rating Scale

*** $p < 0.001$ versus PBO

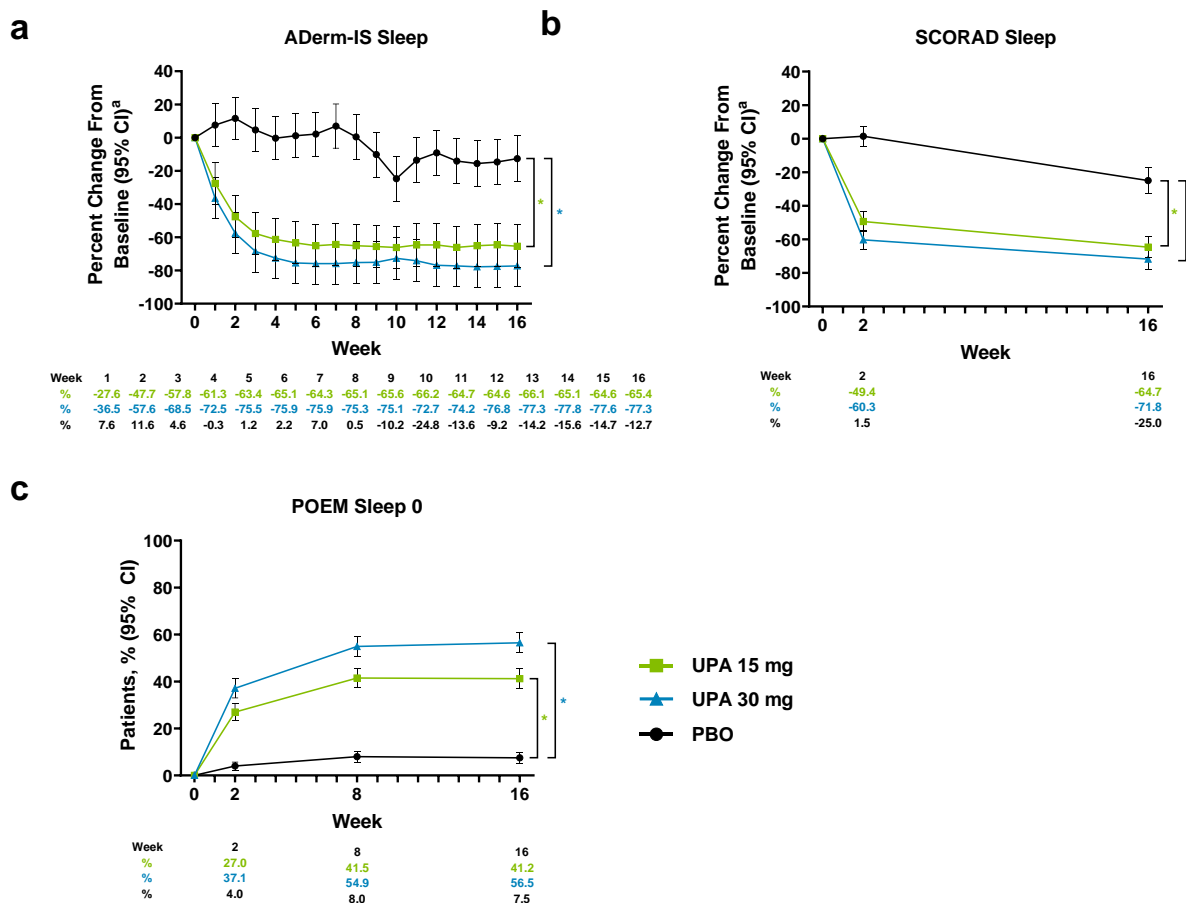
Supplementary Material Fig. 1 Percent change from baseline in (a) WP-NRS and (b) SCORAD Itch measures during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies (MMRM). Percent change from baseline was estimated via LS mean. Comparisons at time points in shaded boxes were multiplicity controlled. *Nominal $P < 0.001$ versus placebo for all time points. **Multiplicity adjusted $P < 0.001$ versus placebo. *LS* least squares, *MMRM* mixed-effect model repeat measurement, *PBO* placebo, *SCORAD* SCORing Atopic Dermatitis, *UPA* upadacitinib, *WP-NRS* Worst Pruritus Numerical Rating Scale



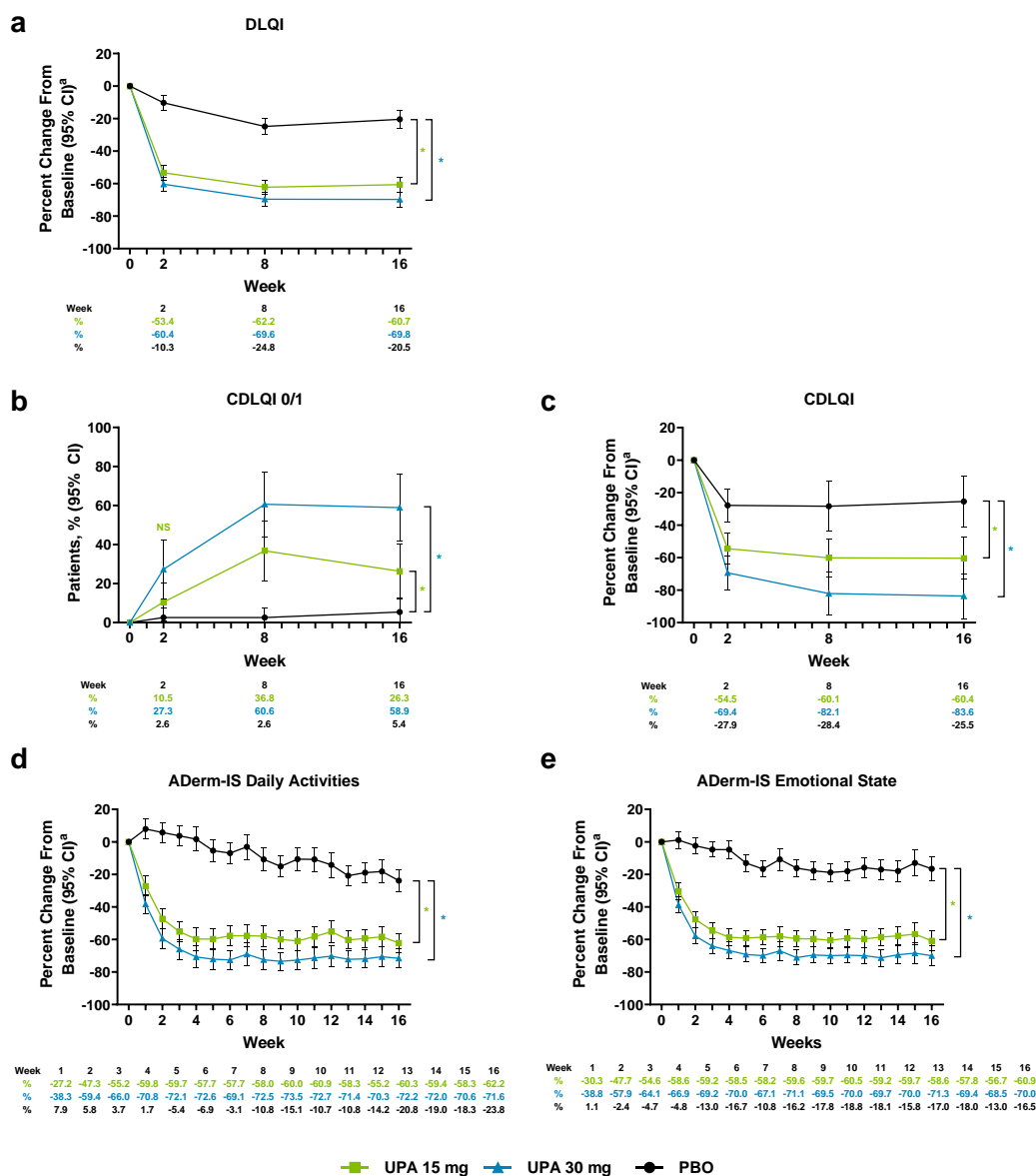
Supplementary Material Fig. 2 Percent change from baseline in (a) ADerm-SS Skin Pain, (b) ADerm-SS TSS-7, and (c) POEM total score during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies (MMRM). Percent change from baseline was estimated via LS mean. *Nominal $P < 0.001$ versus placebo for all time points. *ADerm-SS* Atopic Dermatitis Symptom Scale, *CI* confidence interval, *LS* least squares, *MMRM* mixed-effect model repeat measurement, *PBO* placebo, *POEM* Patient-Oriented Eczema Measure, *TSS-77*-item total symptom score, *UPA* upadacitinib



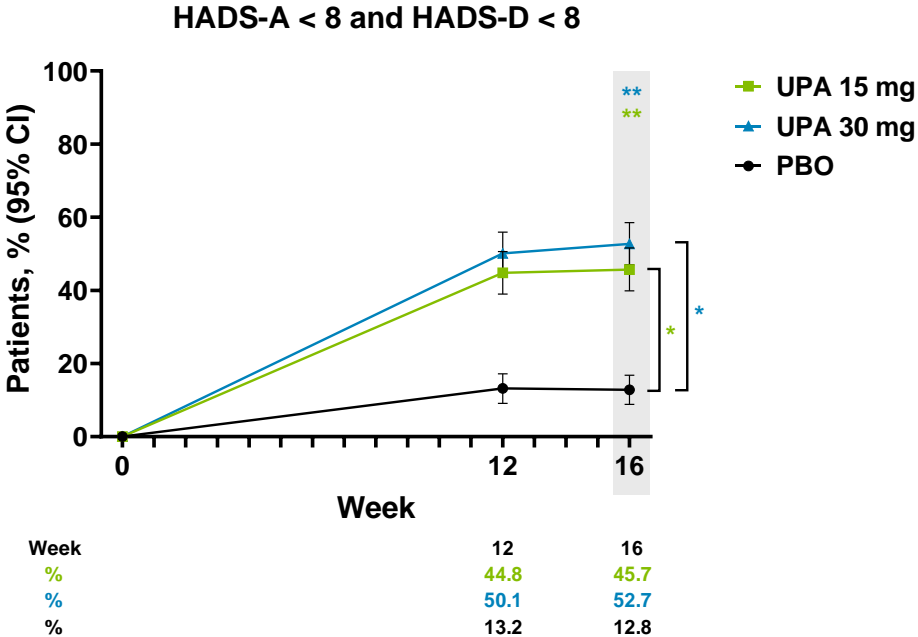
Supplementary Material Fig. 3 Percent change from baseline in (a) ADerm-IS Sleep (MMRM), (b) SCORAD Sleep (MMRM), and (c) achievement of POEM Sleep 0 (NRI-C) during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies. ^aEstimated via LS mean. *Nominal $P < 0.001$ versus placebo for all time points. LS least squares, MMRM mixed-effect model repeat measurement, NRI-C non-responder imputation incorporating multiple imputation for missing data due to COVID-19, ADerm-IS Atopic Dermatitis Impact Scale, PBO placebo, POEM Patient-Oriented Eczema Measure, SCORAD SCORing atopic dermatitis, UPA upadacitinib



Supplementary Material Fig. 4 Percent change from baseline in (a) DLQI (MMRM), (b) achievement of CDLQI scores 0/1 (NRI-C), (c) percent change from baseline in CDLQI (MMRM), (d) percent change from baseline in ADerm-IS Daily Activities (MMRM), and (e) percent change from baseline in ADerm-IS Emotional State (MMRM) during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies. ^aEstimated via LS mean. *Nominal $P < 0.01$ versus placebo for all time points, unless otherwise noted by "NS." ADerm-IS Atopic Dermatitis Impact Scale, CDLQI/Children's Dermatology Life Quality Index, CI confidence interval, DLQI Dermatology Life Quality Index, LS least squares, MMRM mixed-effect model repeat measurement, NRI-C non-responder imputation incorporating multiple imputation for missing data due to COVID-19, NS not significant, PBO placebo, UPA upadacitinib



Supplementary Material Fig. 5 Patients enrolled in the Measure Up 1 and Measure Up 2 studies who achieved HADS-A scores < 8 and HADS-D scores < 8 during the double-blind period (NRI-C).^a Comparison at time point in shaded box was multiplicity controlled. *Nominal $P < 0.001$ versus placebo for all time points. ** Multiplicity adjusted $P < 0.001$ versus placebo.
^aAssessed in patients with HADS-A scores ≥ 8 or HADS-D scores ≥ 8 at baseline. *CI* confidence interval, *HADS-A* Hospital Anxiety and Depression Scale-Anxiety, *HADS-D* Hospital Anxiety and Depression Scale-Depression, *NRI-C* non-responder imputation incorporating multiple imputation for missing data due to COVID-19, *PBO* placebo, *UPA* upadacitinib



Supplementary Material Fig. 6 Patient global impressions during the double-blind period for patients enrolled in the Measure Up 1 and Measure Up 2 studies for (a) proportion of patients who report symptoms to be “absent” or “minimal” on the PGIS^a scale, (b) proportion of patients who are “much improved” or “very much improved” on the PGIC scale, and (c) proportion of patients who are “very satisfied” or “extremely satisfied” on the PGIT^b scale. ^aNominal $P < 0.001$ for all time points. ^aFor patients without “absent” or “minimal” symptoms at baseline. ^bFor patients who were not “very satisfied” or “extremely satisfied” at baseline. *CI* confidence interval, *PBO* placebo, *PGIC* Patient Global Impression of Change, *PGIS* Patient Global Impression of Severity, *PGIT* Patient Global Impression of Treatment, *UPA* upadacitinib

