

Supplemental Table I: Demographics, disease characteristics, treatment, and outcomes of patients who developed new or worsening psoriasis on dupilumab

Case Reports and Series							
Study type (No. patients)	Age (years) / Sex	PHx PsO / FHx PsO	PsO description	Histopathologic description	Latency period (months)	Dupilumab discontinued due to PsO	Treatment / Outcome
CR (1)	72 / M	N / NR	Well-defined erythematous plaques with yellow scale on the scalp, eyebrows, and external auditory meatus	NR	4	N	Shampoos containing clobetasol propionate, salicylic acid 0.5%, and distilled coal tar 1% for 8 months / Complete resolution
CS (3)	61 / F	N / N	Small, scaly erythematous papules on the trunk and extremities	NR	1	N	Clobetasol cream for 4 weeks / Complete resolution
	56 / F	N / N	Sharply demarcated erythematous plaques	Hyperplastic epidermis with papillomatosis, hypogranulosis, parakeratosis and neutrophils in the corneum layer; slight perivascular lymphocytic infiltrate in the upper dermis	2	N	Calcipotriene-betamethasone dipropionate foam for 4 weeks / Complete resolution
	39 / M	N / N	Itchy erythematous-squamous plaques on the soles	NR	1	N	Topical corticosteroids for 4 weeks / Complete resolution
CS (3)	32 / F	NR / NR	Well-demarcated, bright red, erythematous plaques with micaceous scale on the scalp; sharply demarcated erythematous patches in the inguinal folds	NR	1	N	Topical corticosteroids / NR
	67 / M	NR / NR	Pink scaly rash on the scalp	NR	2	N	Topical corticosteroids / NR
	57 / F	NR / NR	Well-demarcated erythematous plaques with micaceous scaling on the frontal scalp, eyebrows, eyelids, and cheeks	NR	9	N	Topical corticosteroids / NR
CR (1)	35 / M	Y / NR	Skin changes characteristic of psoriasis on the forehead, arms, lower leg	Changes characteristic of psoriasis	5	NR	NR
CR (1)	42 / M	N / N	Diffuse erythematous and scaly plaques on the trunk and limbs	NR	3	Y	Topical calcipotriene and betamethasone dipropionate foam for 40 days / Complete resolution
CS (2)	54 / M	N / NR	Nearly erythrodermic with diffuse, psoriasiform, well-defined scaly plaques on the upper and lower extremities, chest, back, neck, and abdomen; Auspitz sign positive; diffuse, prominent keratoderma on the soles; punctate keratoderma on the palms	Acute spongiotic dermatitis with lymphocyte exocytosis	4	Y	None / Significant improvement 2 months after discontinuation of dupilumab
	49 / F	N / NR	Well-demarcated erythematous plaques on the extremities; scattered, disorganized fingernail pits	NR	17	N	Triamcinolone 0.1% ointment / No response; Clobetasol ointment / Significant improvement
CR (1)	24 / M	N / N	Dermatitis suggestive of inverse psoriasis in the armpits, navel and intergluteal cleft	NR	1.5	N	Itraconazole 200 mg/day and topical antifungal and corticosteroid for 10 days / Complete resolution
CR (1)	59 / M	N / N	Massive erythroderma in part with largely scaling plaques on the extremities	Psoriasiform hyperplasia with decreased granular layer and focal parakeratosis with perivascular lymphocytic infiltrates in the dermis	1	Y	NR
CR (1)	40 / F	N / N	Few scattered erythematous-squamous lesions on the trunk and extremities	Parakeratosis, hyperkeratosis, acanthosis, dilated capillaries, and a lymphocytic infiltrate in the upper dermis	4	N	Calcipotriol-betamethasone foam for 3 weeks / Complete resolution

CR (1)	36 / F	N / N	Well-demarcated erythematous plaques with silvery scale on the knees and shins	Hyperkeratosis with confluent parakeratosis, uniformly elongated rete ridges, and the absence of the granular layer; thinning of the suprapapillary plates and neutrophils in the stratum corneum consistent with Munro microabscesses; superficial perivascular infiltrate of lymphocytes	5	N	Clobetasol / No response; Remission 6 weeks after dupilumab discontinuation, then recurrence after restarting dupilumab
CR (1)	60 / M	N / NR	Erythemic with keratinous proliferation and scales on the knees, right condyle to the hands, elbows, and face	Hyperkeratosis, thinning and disappearance of the stratum granulosum, and neutrophilic infiltration into the stratum corneum	2	Y	Alclometasone and clobetasol / Improvement 1 month after dupilumab discontinuation
CR (1)	92 / M	NR / NR	Psoriasiform plaques on the extremities	Acanthosis, parakeratosis with abundant neutrophils, loss of the granular cell layer, minimal spongiosis, dilated capillary loops in the papillary dermis, perivascular lymphocyte predominant inflammatory infiltrate	8	N	Mycophenolate mofetil 1000mg twice daily / Complete resolution
CS (3)	74 / F	N / N	Erythematous and hyperkeratotic plaques on the scalp	Parakeratosis, hyperkeratosis, Munro microabscess, and inflammatory dermal infiltrate composed mainly by lymphoplasma cells	6	N	Clobetasol / Improvement
	50 / M	N / N	Well-defined, infiltrated and hyperkeratotic on the scalp, hands, and upper limbs	Hyperkeratosis, parakeratosis, psoriasiform hyperplasia, and dermal infiltrate composed mainly by T-lymphocytes and neutrophils	5	N	Calcipotriene-betamethasone / Improvement
	32 / M	N / Y	Erythematous and scaly plaques on the hands, trunk, and lower limbs	Parakeratosis, hyperkeratosis, Munro microabscess, and dermal infiltrate of lymphocytes, macrophages, and neutrophils	1	Y	Clobetasol, prednisone, nbUVB / No improvement
CR (1)	55 / M	N / N	Erythematous scaly plaques on the trunk	Parakeratosis, hyperkeratosis, acanthosis, dilated capillaries, and a lymphocytic infiltrate in the upper dermis	2	N	Topical corticosteroid / Improvement
CR (1)	80 / M	NR / NR	Scaling erythematous plaques on the trunk and extremities	Orthokeratosis overlying parakeratosis, very mild spongiosis, lymphocyte exocytosis, and a mild superficial perivascular lymphocytic infiltrate	2.5	Y	nbUVB / Improvement
CR (1)	59 / F	NR / NR	Psoriasiform plaques on the bilateral extensor surfaces of her upper and lower extremities	Histopathology revealed confluent parakeratosis with absent granular cell layer, regular acanthosis, and thinning of the suprapapillary plates	1	Y	Triamcinolone / Improvement
CR (1)	50s / F	NR / NR	Erythrodermic with well-demarcated, erythematous plaques with thick white scale on the trunk and bilateral upper and lower extremities; oval pink plaques with thick, adherent scale on the scalp	Biopsy 1: Psoriasiform hyperplasia, hypogranulosis, parakeratosis with focal neutrophils; perivascular and diffuse dermal neutrophils, histiocytes and occasional eosinophils; Biopsy 2: irregular acanthosis, mild spongiosis, and subcorneal pustules with focal parakeratosis	2	Y	Methotrexate and topical corticosteroids / Marked improvement
CR (1)	73 / M	NR / NR	Well-demarcated, thick, scaly pink plaques of the extensor surfaces of the bilateral forearms and right leg	NR	1	NR	NR
Cohort Studies							
RCS (NR)	NR	NR / NR	Guttate psoriasis	NR	NR	NR	NR
RCS (1)	NR	NR / NR	Psoriasiform dermatitis	NR	NR	NR	None / Complete resolution after second dupilumab dose
RCS (1)	NR	NR / NR	Paradoxical psoriasis	NR	NR	Y	NR

RCS (7)	51 ^a / 4F, 3M	N / N	Plaque (5), generalized pustular (3), intertriginous and flexural (2), palmoplantar (1), nail (1)	NR	4 ^b	5 Y, 2 N	Topical corticosteroids (6); phototherapy (1); methotrexate (2); prednisone (1); apremilast, ustekinumab, anakinra, upadacitinib (1) / Stable (1), partial improvement (3), complete resolution (1)
PCS (5)	44 ^b / 2F, 3M	NR / NR	Psoriasiform eruption	NR	2.95 ^b	NR	NR
RCS (5)	NR	NR	NR	NR	NR	NR	NR
PCS (1)	NR	NR / NR	Guttate psoriasis	NR	6	Y	NR
RCS (1)	NR	NR / NR	Severe psoriasis	NR	NR	Y	NR

^aMedian

^bMean

CR, case report; CS, case series; F, female; FHx, family history; M, male; N, no; nbUVB, narrowband ultraviolet B; No., number; NR, not reported; PCS, prospective cohort study; PHx, personal history; PsO, psoriasis; RCS, retrospective cohort study; Y, yes