

FIGURE 1
Management of Immune-Related Dermatologic Toxicities^{1,2,4,10,13,14}

Background: Skin toxicities related to immune therapy typically presents as erythematous, reticular, and maculopapular rash and are often located across the trunk and extremities. The median time to onset is 3 to 6 weeks (ranges up to 17 weeks for ipilimumab and nivolumab). Pruritus, sometimes severe, may occur in the absence of a frank rash. Rashes are usually mild (grade 1-2) and can be managed symptomatically. Severe rashes (grade 4), such as bullous pemphigoid, Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrosis (TEN), are reported in <5% of patients. Any signs of desquamation at any grade should be considered a medical emergency and treated as grade 4.

	Description	Referral	MANAGEMENT		
			Corticosteroids	Supportive Therapy	Immune Therapy
DERMATITIS	GRADE 1 Macules/papules covering <10% BSA with or without associated symptoms [§] .	Not required.	Not required; can consider topical steroids (e.g. mild symptoms: hydrocortisone 1% or moderate symptoms: betamethasone 0.1% cream).	Apply thick emollients (e.g., urea based cream) or oatmeal baths; avoid sun; cool compress for itching; consider PO anti-histamines or anti-pruritic (e.g. diphenhydramine or hydroxyzine).	Monitor closely and continue immune therapy unless symptoms are intolerable.
	GRADE 2 Macules/papules covering 10-30% BSA with or without associated symptoms [§] ; limiting ADL.	Consider dermatology consult if persistent grade 2 symptoms lasting >1-2 weeks.	Topical steroids; consider PO prednisone 0.5-1 mg/kg/day if symptoms persists >7 days, then taper over 2-4 weeks if 0.5 mg/kg and over 4 weeks if 1 mg/kg once resolved to grade 0-1.	Above plus consider oral antibiotics if needed.	If symptoms are intolerable, hold therapy until resolution to grade 0-1.
	GRADE 3 Macules/papules covering >30% BSA with or without associated symptoms [§] ; limiting self care ADL; local superinfection.	Refer to dermatology if grade 3-4 for consult ± biopsy.	Start 0.5-1 mg/kg/day PO prednisone then taper over 2-4 weeks if 0.5 mg/kg and over 4 weeks if 1 mg/kg once resolved to grade 0-1. If severe consider IV steroids (as below).	Admit to hospital for supportive management - fluids and electrolytes; consider empiric antibiotics as per institutional guidelines if needed.	Withhold therapy until resolution to grade 0-1; consider discontinuation if no improvement within 12 weeks.
	GRADE 4 SJS* or widespread mucosal ulcerations: complicated rash with full-thickness dermal ulceration or necrosis; life-threatening.		Start 1-2 mg/kg/day IV methylprednisolone, then taper over ≥4 weeks once resolved to grade 0-1.		Discontinue therapy.

§ as per CTCAE version 4.0 = pruritus, burning, tightness or equivalent

* Symptoms indicative of Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrosis (TEN): macules rapidly spread and coalesce, leading to epidermal blistering, necrosis, and sloughing.