Supplemental Table 1. Concurrent medications and peripheral eosinophil counts

Patient No.	Concurrent Medications[a]	Serum Eosinophils (Absolute Count, Cells/uL)[b]
1	Vitamin C, oral antioxidant, cat's claw (uncaria tomentosa), enoxaparin, digestive enzymes, iodine, thymus replacement, zinc	90
2	Sodium/potassium phosphate, pioglitazone/metformin, glimepiride, zolpidem, testosterone, valsartan/hydrochlorothiazide, metoprolol, niacin, rosuvastatin, multivitamin, aspirin, fish oil, glucosamine/chondroitin	380
3	Montelukast, omeprazole, trazodone, ropinirole, lamotrigine, fexofenadine/pseudoephedrine, multivitamin	190
4	Aripiprazole, escitalopram, fexofenadine, ondansetron, zolpidem	20
5	Levothyroxine, atenolol, enalapril/hydrochlorothiazide, atorvastatin	320
6	Temazepam, sulindac, finasteride, tamsulosin, aspirin, calcium, fish oil, multivitamin, fluorouracil	300
7	Atorvastatin, oxybutynin, docusate, senna, polyethylene glycol, ibuprofen, sildenafil	400
8	Aspirin, metoprolol	160
9	Metoprolol, lisinopril, clopidogrel, simvastatin, bupropion, clonazepam, valproic acid, ipratropium bromide/albuterol, ciclesonide, iron, imodium, megestrol acetate	300
10	None	40
11	Almotriptan, alprazolam, amitriptyline, vitamin D3, eletriptan, topiramate, zinc	320
12	Aspirin, vitamin D3, hydrochlorothiazide, levothyroxine, rosuvastatin, ranitidine, trandolapril, sulfamethoxazole/trimethoprim	340
13	Sulfamethoxazole/trimethoprim, pantroprazole, mesalamine, multivitamin, fluticasone/salmeterol, tiotropium, atorvastatin, silodosin, ramipril	700
14	Oxycodone, colace, senna, fentanyl	500
15	Atorvastatin, alprazolam, vitamin C	500
16	Alprazolam, pantropazole, ondanestron, duloxetine, bisacodyl	200

Legend:
[a]At time of clinical presentation
[b]Serum eosinophils at time of biopsy

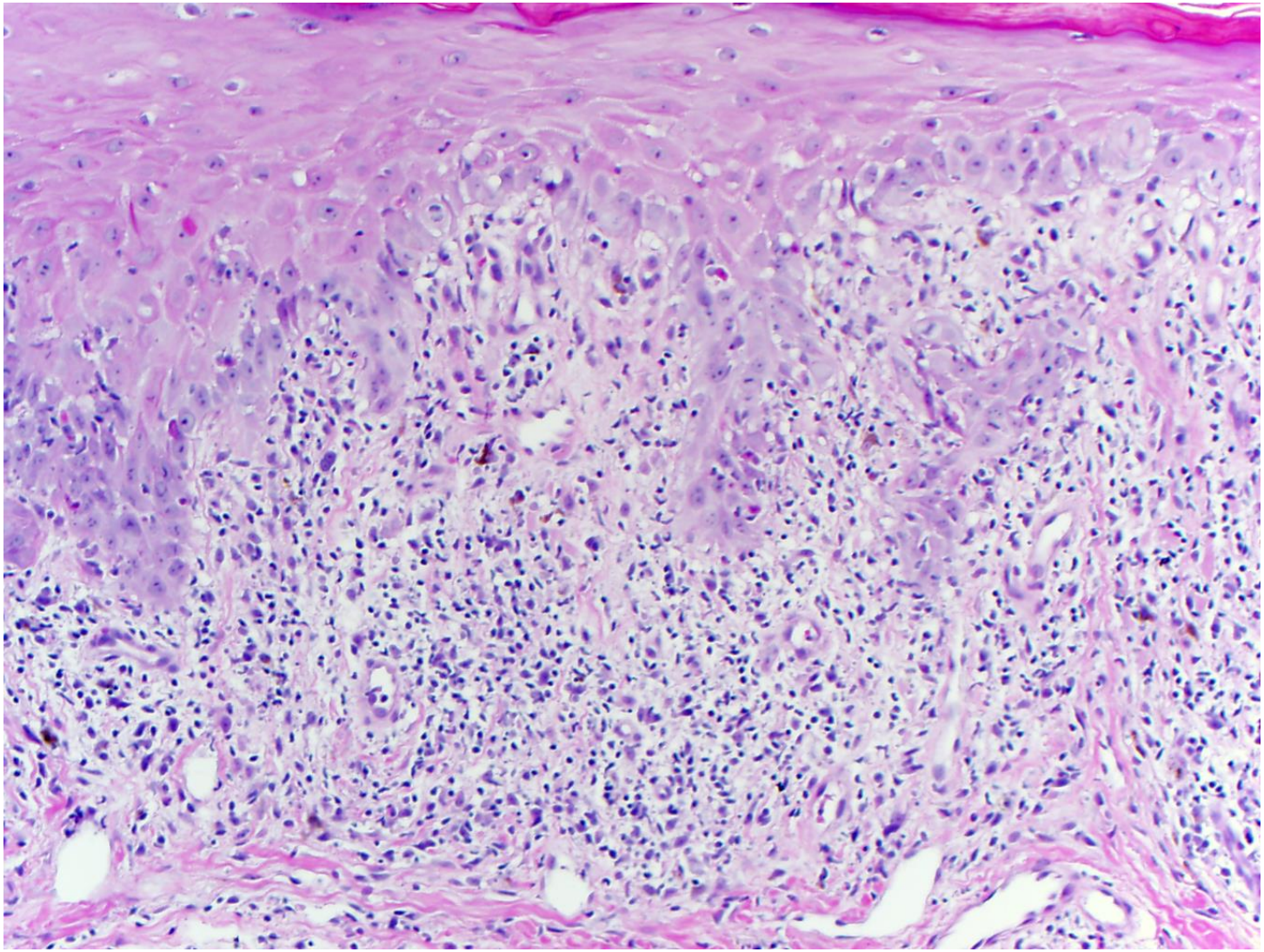
Supplemental Table 2. Summary and literature review of biopsy-proven lichenoid dermatitis induced by treatment with anti-PD-1/PD-L1

Study	Tumor type	Oncologic agent	Total patients with cutaneous irAEs	Total cutaneous irAE specimens	Proportion of biopsies that were lichenoid	Immunohistochemistry
Joseph et al.[1]	Melanoma	anti-PD-1	3	3	N/A[a]	▪ Diffuse CD3+ lymphocytes (CD4>CD8) ▪ 10-20% PD-1+ T cells
Schaberg et al.[2]	Melanoma, lung, urothelial, HNSCC	anti-PD-1 anti-PD-L1	5	5	N/A[a]	▪ Significantly greater CD163+ infiltrates, increased spongiosis, and epidermal necrosis when compared to idiopathic LP and LP-like keratosis ▪ No difference in CD3, CD4:CD8 ratio, PD-1, PD-L1, CD20, CD25, Foxp3, or CXCL13
Hwang et al.[3]	Melanoma	anti-PD-1	40	16 (from 10 patients with lichenoid reaction)	N/A[a]	None
Shi et al.[4]	Melanoma, lung, RCC	anti-PD-1 anti-PD-L1 anti-PD-1 anti-CTLA-4	20	17	16/17 (94%)	▪ CD3+, CD4+ CD8+ CD20- (3 patients)
Belum et al.[5]	Melanoma, lung, urothelial, astrocytoma, breast, multiple myeloma, MALT lymphoma, B-cell lymphoma, CLL	anti-PD-1	14	13	7/13 (54%)[b]	None
Goldinger et al.[6]	Melanoma	anti-PD-1	15	12 (from 8 patients)	10/12 (83%)	▪ CD8+ accumulation at the DEJ and CD8+ exocytosis in the epidermis, keratinocyte apoptosis (6 patients) ▪ PD-1+ infiltrating T cells and keratinocytes, PD-L1+ keratinocytes (1 patient, later time course)
Chou et al.[7]	Melanoma, lung, RCC	anti-PD-1 anti-PD-1 + anti-CTLA-4	22	29	N/A[a]	None
Tetzlaff et al.[8]	Melanoma, lung	Anti-PD-1	3	5	N/A[a]	None

Abbreviations: CTLA-4, cytotoxic T lymphocyte associated antigen 4; CLL, chronic lymphocytic leukemia; DEJ, dermal-epidermal junction; HNSCC, head and neck squamous cell carcinoma; irAE, immune-related adverse event; LP, lichen planus; MALT, mucosa associated lymphoid tissue; N/A, not applicable; PD-1, programmed cell death protein 1; PD-L1, PD1 ligand; RCC, renal cell carcinoma

Legend:
[a]Proportions were not calculated for specimen cohorts that were comprised solely of lichenoid eruptions
[b]Excluding 3 specimens with interface dermatitis

Supplemental Figure 1. The lichenoid reaction pattern is characterized by a band of lymphocytes abutting the dermal-epidermal junction and destruction of the basal layer of keratinocytes.



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