## Reply to: "Use of immortal time within survival analysis"

*To the Editor:* We welcome the discussion regarding the immortal time bias within our study. To address this concern, we performed a Cox proportional hazard regression treating time to dermatitis as the time-dependent covariate for the dermatitis patients (cases).[1] Those who never had dermatitis were defined as nondermatitis patients (controls). The hazard ratio of dermatitis versus nondermatitis patients for progression-free survival was 0.08 (95% confidence interval [CI] 0.02-0.33; $P = .0005$) and for overall survival was 0.24 (95% CI 0.09-0.65; $P = .0055$).[1]

As requested by Chan et al,[2] we also present the data on distribution of follow-up times between patients with dermatitis (cases) and without dermatitis (controls) (Fig 1, *A* and *B*).[1] All of the times to dermatitis of the cases fall within the survival times for the controls, except for 1 case (with an onset of dermatitis at 27 months). If we remove that case from the survival analyses, the results are still significant. By Cox proportional hazard regression, treating time to dermatitis as the time-dependent covariate, the hazard ratio for progression-free survival was 0.12 (95% CI 0.03-0.51; $P = .0039$) and for overall survival 0.31 (95% CI 0.11-0.88; $P = .0274$).[1]

Finally, Chan et al state "it is unclear when (and indeed if) the control group were assessed for dermatitis."[2] The control group was assessed for dermatitis in the same manner as the case group, ie, by manual chart review of the treating physician's progress notes from initiation of programmed cell death 1/programmed cell death ligand 1 inhibitor to

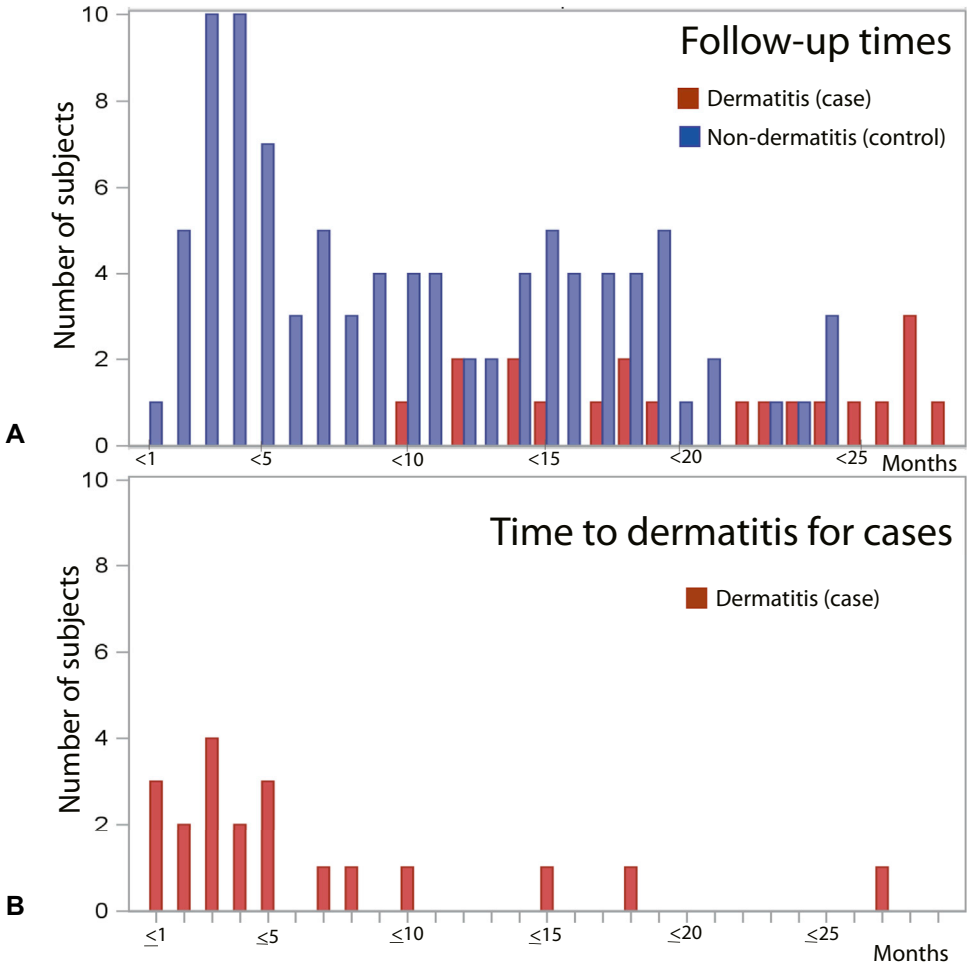


**Fig 1.** **A**, Distribution of follow-up times between patients with dermatitis (cases) and without dermatitis (controls). **B**, Time to dermatitis for cases.

start of another treatment, data cut-off date, or death, whichever occurred first.[1]

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