

**Skin Clearance is Associated with Reduced Treatment Failure in Patients with Psoriasis: Real-World Evidence from the CorEvitas Psoriasis Registry**

Robert R. McLean, DSc, MPH<sup>1</sup>, Adam P. Sima, PhD<sup>1</sup>, Silky Beaty, PharmD, MSPH<sup>2</sup>, Robert Low, PharmD<sup>2</sup>, Rebecca L. Spitzer, MPH<sup>1</sup>, Jeffrey L. Stark, MD<sup>2</sup>, Elizabeth Lesser, MS<sup>1</sup>, Edward Lee, PharmD<sup>2</sup>, April Armstrong, MD, MPH<sup>3</sup>

*<sup>1</sup>CorEvitas, LLC, Waltham, Massachusetts, USA; <sup>2</sup>UCB Pharma, Smyrna, Georgia, USA; <sup>3</sup>Keck School of Medicine at the University of Southern California, Los Angeles, California, USA*

**Correspondence to:**

Robert R. McLean, DSc, MPH

CorEvitas, LLC

Email: [rmclean@corevitas.com](mailto:rmclean@corevitas.com)

## SUPPLEMENTARY MATERIALS

**Supplementary Table S1.** Eligible medications for enrollment<sup>a</sup>

	<b>Class</b>	<b>Treatments</b>
<b>Biologic treatments</b>	TNF inhibitors	<ul style="list-style-type: none"> <li>• Adalimumab</li> <li>• Certolizumab</li> <li>• Etanercept</li> <li>• Infliximab</li> </ul>
	IL-12/23 inhibitors	<ul style="list-style-type: none"> <li>• Ustekinumab</li> </ul>
	IL-23 inhibitors	<ul style="list-style-type: none"> <li>• Guselkumab</li> <li>• Risankizumab</li> <li>• Tildrakizumab</li> </ul>
	IL-17A inhibitors	<ul style="list-style-type: none"> <li>• Secukinumab</li> <li>• Ixekizumab</li> <li>• Brodalumab</li> </ul>
<b>Non-biologic treatments</b>	N/A	<ul style="list-style-type: none"> <li>• Methotrexate</li> <li>• Cyclosporine</li> <li>• Apremilast</li> <li>• Acitretin</li> </ul>

<sup>a</sup>Eligible medications for enrollment include those approved by the FDA for PSO.

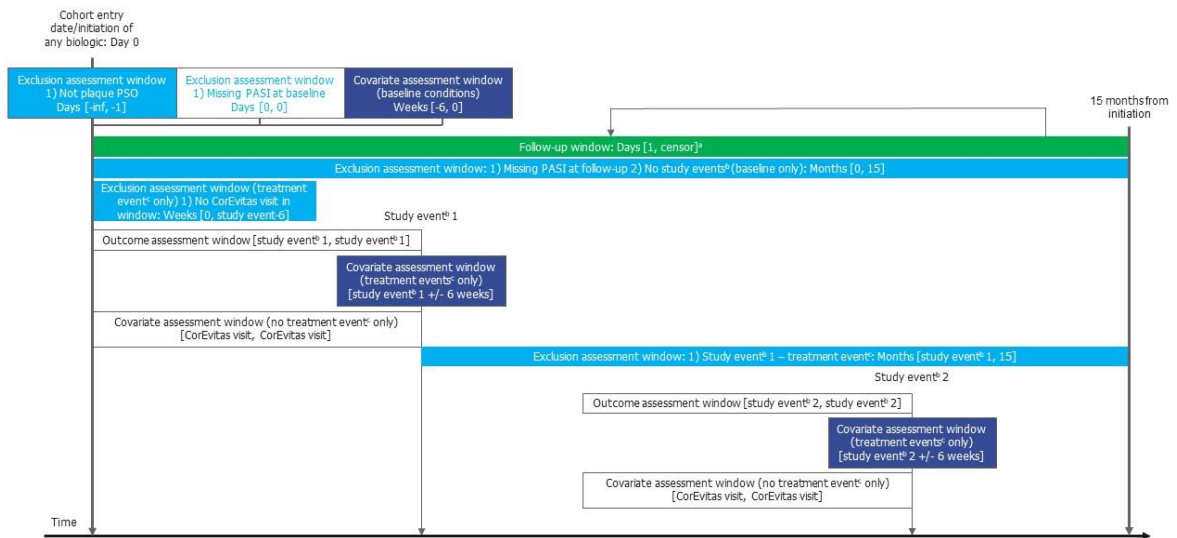
FDA: Food and Drug Administration; IL: interleukin; PSO: psoriasis; TNF: tumor necrosis factor.

**Supplementary Table S2.** Treatment event terms and definitions

<b>Term</b>	<b>Definition</b>
<b>Persistence</b>	Patients that remained on original systemic biologic therapy and did not have a systemic non-biologic therapy added (methotrexate, cyclosporine, apremilast, or acitretin) that was not used at baseline
<b>Non-persistence</b>	Patients that discontinued original biologic systemic therapy due to non-failure discontinuation, failure discontinuation, or start of new biologic systemic
<b>Non-failure discontinuation</b>	Patients that discontinued original systemic biologic therapy due to: patient doing well (patient reached pre-defined target of disease activity and treating provider stopped medication or decreased dose/frequency or substituted medication for one with a different safety/efficacy profile), stopping due to fear of future side effect(s), temporary interruptions with systemic biologic therapy restart (restart was ≤45 days after next scheduled dose following discontinuation date), patient requested change due to reasons not related to effectiveness or safety, co-pay/patient cost, patient denied by insurance, patient preference for different frequency or route of administration, planned or existing pregnancy, breastfeeding, concerns about COVID-19, or other (as determined by provider)
<b>Treatment failure</b>	Patients with earliest incidence of discontinuation of a systemic biologic therapy for reasons related to treatment performance, adverse events, or the addition of a systemic non-biologic therapy occurring more than 30 days after the biologic initiation. Discontinuations due to the following reasons were considered treatment failures: stopped due to side effect (serious, minor), switched biologic or frequency of administration change to improve compliance, switched biologic or dose change to improve tolerability, stopped due to poor efficacy (inadequate initial response, failure to maintain initial response, or active disease), dose changed to treat active disease (flare), switched to biologic with alternative MOA to improve control of disease activity, and start of a new systemic non-biologic therapy

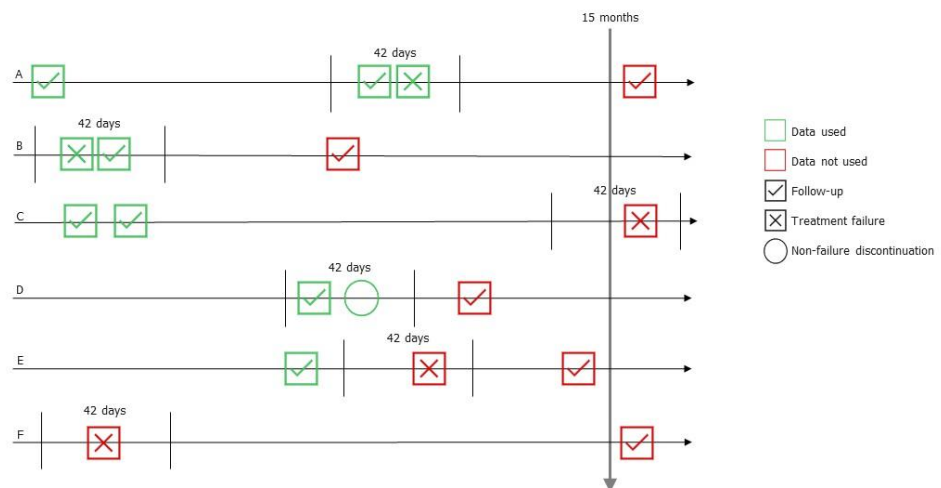
MOA: mechanism of action.

## Supplementary Figure S1. Study design



<sup>a</sup>A patient is censored at the first occurrence of a treatment event or the last CorEvitas visit before 15 months from initiation; <sup>b</sup>Study event is defined as a treatment event or CorEvitas visit with no corresponding treatment event; <sup>c</sup>Treatment event is a discontinuation of a biologic systemic for any reason or an addition of a non-biologic systemic. PASI: Psoriasis Area and Severity Index; PSO: psoriasis.

## Supplementary Figure S2. Hypothetical patient journeys



Patients A and B have a treatment failure corresponding to a registry visit. Patients A and C had no censoring of any data in the first 15 months following initiation. Patients B and D had a registry visit censored after having a registry visit within the window of a treatment failure and non-failure discontinuation, respectively. Patients E and F have a treatment failure without a corresponding registry visit. The lone registry visit occurring prior to the treatment failure for patient E would be included in the study as a non-failure. Patient F did not have any registry visits before the treatment failure; thus, this patient would not have contributed to the current study.