



INFLAMMATORY SKIN DISEASES (OTHER THAN ATOPIC DERMATITIS & PSORIASIS)

## INTERNATIONAL CONSENSUS CRITERIA FOR THE OUTCOME MEASURES OF ULCERATIVE PYODERMA GANGRENOSUM

*Michelle Y. Cheng<sup>(1)</sup> - Jenny Wang<sup>(1)</sup> - Kanade Shinkai<sup>(2)</sup> - David Fiorentino<sup>(3)</sup> - Jeffrey Callen<sup>(4)</sup> - Uwe Wollina<sup>(5)</sup> - Angelo Valerio Marzano<sup>(6)</sup> - Daniel Wallach<sup>(7)</sup> - Kyoungmi Kim<sup>(8)</sup> - Courtney Schadt<sup>(9)</sup> - Anthony Ormerod<sup>(10)</sup> - Fiona Craig<sup>(10)</sup> - Hywel Williams<sup>(11)</sup> - Frank Powell<sup>(12)</sup> - Alexander Merleev<sup>(1)</sup> - Emanuel Maverakis<sup>(1)</sup>*

*University of California Davis, Dermatology, Sacramento, United States<sup>(1)</sup> - University of California San Francisco, Dermatology, San Francisco, United States<sup>(2)</sup> - Stanford University, Dermatology, Stanford, United States<sup>(3)</sup> - University of Louisville, Medicine, Louisville, United States<sup>(4)</sup> - Hospital Dresden-Friedrichstadt, Dermatology, Dresden, Germany<sup>(5)</sup> - UOC di Dermatologia, Medical-Surgical Physiopathology, Milano, Italy<sup>(6)</sup> - Paris Hospitals, Dermatology, Paris, France<sup>(7)</sup> - University of California Davis, Public Health Sciences, Davis, United States<sup>(8)</sup> - University of Louisville, Dermatology, Louisville, United States<sup>(9)</sup> - University of Aberdeen, Dermatology, Aberdeen, United Kingdom<sup>(10)</sup> - University of Nottingham, Dermatology, Nottingham, United States<sup>(11)</sup> - Charles Institute of Dermatology, Dermatology, Dublin, Ireland<sup>(12)</sup>*

**Background:** Pyoderma gangrenosum (PG) is a rare inflammatory skin condition that is difficult to diagnose and treat. Although validated diagnostic criteria have recently been published, there is still no outcome measure proposed for PG.

**Objective:** Our goal is to use an international consensus group to propose and validate an outcome measure for ulcerative PG. Outcome measures can guide treatment selection by quantifying the severity of the disease and the response to other treatments. Additionally, it can objectively compare treatment responses in clinical trials.

**Methods:** 15 international PG experts were selected. 3 physicians did not respond and the remaining 12 agreed to participate. Delphi consensus rounds were performed and analyzed using the RAND/UCLA Appropriateness Method. Statements that the experts agreed to be appropriate were used to create the outcome measure. Statements that were not deemed appropriate were revised based on suggestions and resubmitted on a subsequent Delphi round. Afterwards, all approved statements were used to create the outcome measure, which then underwent Delphi consensus rounds and revisions until experts agreed on its appropriateness.

**Results:** All 12 physicians (100%) responded to every round of the Delphi exercise. After





completion of 4 Delphi rounds, 10 statements were agreed to be appropriate and subsequently used to create the outcome measure. Active disease was determined by presence of peripheral erythema, undermining border, number and depth of ulcer, total surface area involved. Definitions and guidelines for measuring these factors were also approved and incorporated into the outcome measure. The final product underwent two Delphi consensus rounds with revisions before it was deemed appropriate.

Conclusion: Our PG outcome measure was created with international expert consensus. This Pyoderma Gangrenosum Assessment Score can be used for ulcerative PG management and clinical trial analysis.

