# Supplementary Online Content

Ji-Xu A, Liakos W, Merleev A, Brüggen MC, Nelson CA. Assessing the discriminatory ability of diagnostic criteria for ulcerative pyoderma gangrenosum and its mimickers. *JAMA Dermatol*. Published online January 18, 2023. doi:10.1001/jamadermatol.2022.5978



This supplementary material has been provided by the authors to give readers additional information about their work.

**eMethods**

Searches were conducted on MEDLINE from January 2000-April 2022. Search terms used for PG cases were "pyoderma gangrenosum" and "pyoderma gangrenosa". PG cases were included if the age of the patient was >18 years, clinicopathological data was consistent with diagnosis, and the diagnosis was ulcerative PG (in any anatomical region). Cases were excluded if they were previously used to develop diagnostic criteria or if they described atypical (i.e. non-ulcerative) PG. The search term used for PG mimickers was "ulcer". PG mimicker cases were included if the age of the patient was >18 years, clinicopathological data was consistent with diagnosis, and the diagnosis was a known PG mimicker as previously described in Weenig *et al.*[1]: vascular occlusive or venous disease, primary infection, cancer, drug-induced or exogenous tissue injury or vasculitis. Two independent reviewers screened abstracts and articles for inclusion and assigned diagnostic criteria scores to cases. Any disagreements during screening or scoring were resolved by an independent board-certified dermatologist. Authors were contacted for missing data. Statistical analyses were performed using R version 4.1.2 (R Core Team). Discrimination and calibration statistics were first calculated by including cases with complete data only. Results were then validated with imputed case data to explore potential biases due to systemic missingness. Missing data were accounted for using the multiple imputation by chained equations (MICE) framework, under both missing completely at random (MCAR) and missing at random (MAR) assumptions. A two-sided p-value of <0.05 was considered statistically significant.

**eTable 1.** Published Diagnostic Criteria for Pyoderma Gangrenosum

| **Su criteria (2004)** | **Delphi consensus criteria (2018)** | **PARACELSUS score (2019)** |
|---|---|---|
| Requires 2/2 major criteria and 2/4 minor criteria | Requires 1/1 major criterion and 4/8 minor criteria | PG highly likely if ≥10 points |
| **Major criteria** | **Major criterion** | **Major criteria (three points each)** |
| Rapid progression of a painful, necrolytic cutaneous ulcer with an irregular, violaceous, and undermined border | Biopsy with neutrophilic infiltrate | Progressive course of disease (<6 weeks for development of ulcer) |
| Exclusion of other causes of cutaneous ulceration | | Absence of relevant differential diagnoses |
| | | Reddish-violaceous wound border |
| **Minor criteria** | **Minor criteria** | **Minor criteria (two points each)** |
| Pathergy or cribriform scarring | Exclusion of infection | Amelioration with immunosuppressant |
| Systemic disease associated with PG | Pathergy | Characteristically bizarre ulcer shape |
| Histopathologic findings | History of IBD or inflammatory arthritis | Extreme pain (>4/10 on VAS) |
| Treatment response (rapid response to systemic steroid treatment) | Papule, pustule, or vesicle ulcerating within 4 days of appearing | Localized pathergy phenomenon |
| | Peripheral erythema, undermining border, and tenderness at ulceration site | **Additional criteria (one point each)** |
| | Multiple ulcerations (at least one occurring on an anterior lower leg) | Suppurative inflammation in histopathology |
| | Cribriform or "wrinkled paper" scarring | Undermined wound border |
| | Decrease in ulcer size within 1 month of immunosuppressive medication | Associated systemic disease |

PG, pyoderma gangrenosum; VAS, visual analog scale; IBD, inflammatory bowel disease.