

GPP

generalized pustular psoriasis

DISEASE BURDEN AND UNMET NEEDS

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Not an actual patient—for illustrative purposes only.

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What is generalized pustular psoriasis?

Generalized pustular psoriasis (GPP) is a chronic, inflammatory skin disease characterized by potentially life-threatening flares.[1-2] GPP can be relapsing with recurrent flares or persistent with intermittent flares.[3-5] Estimates of GPP prevalence range from 2–124 cases per million people.[1,3]

Disease recognition and diagnosis

GPP is a heterogenous diagnosis with severe pustulation during flare states[2-3]

A GPP flare presents as severe pustulation and widespread erythema often with systemic symptoms.[1,4] Between flares (chronic state) patients may experience residual skin scaling, crusts, minor erythema, and fatigue.[2,3]



GPP is distinct from plaque psoriasis, but they often co-occur[4,6]

- ***GPP:*** driven by IL-36 and an innate immune response
- ***Plaque psoriasis:*** driven by IL-23/17 and an adaptive immune response

It is important to exclude acute generalized exanthematous pustulosis (AGEP)[6,7]

- ***AGEP:*** usually drug-induced (often 24-48 hours after drug exposure); usually resolves within 15 days of drug discontinuation; pustules are more pin-sized vs GPP

Accelerate GPP diagnosis with appropriate lab tests[3,8]

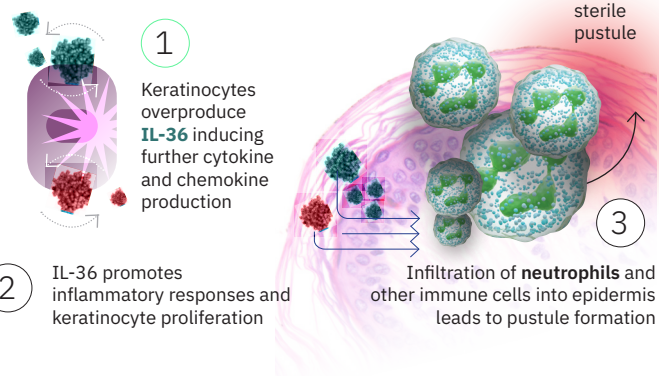
- Leukocytosis
- Lymphopenia
- Elevated CRP level
- Liver function enzyme abnormalities
- Hypoalbuminemia
- Hypocalcemia

Gene mutation testing may support diagnosis[6,8]

- *IL36RN* (most frequent), *CARD14, or AP1S3*

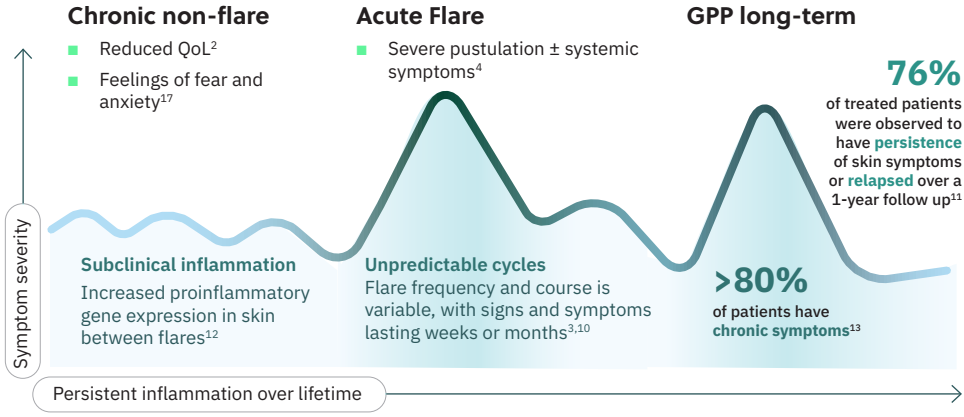
IL-36 pathway dysregulation drives GPP

- IL-36 belongs to the IL-1 superfamily of cytokines, important regulators of the innate immune system[9]
- Overactivation of the IL-36 pathway auto-amplifies and induces neutrophil influx and epidermal hyperproliferation[4,9]



Disease course

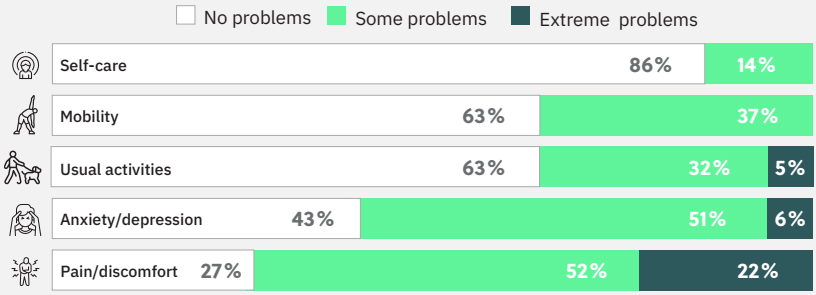
While GPP can present at any age, median age at diagnosis is approximately 50 years.[10] GPP is chronic but punctuated by potentially life-threatening flares.[2] Flare triggers may include: infections, medications, pregnancy, stress, sun exposure, vaccines, or steroid withdrawal.[3,10]



Chronicity and QoL

- Patients can experience significant disease burden between flares, including incomplete skin clearance, residual symptoms, persistent impact on QoL, and high prevalence of comorbidities[2]
- Chronic symptoms contribute to considerable impairment in QoL, and the unpredictablity of flares negatively impacts mental and emotional well-being[2]

QoL impact for patients with GPP for the five dimensions of the EQ-5D[14]



Proportion of patients with GPP (%)

Hospitalization and mortality

- GPP flares commonly require emergency intervention and inpatient care[4]
- It is estimated that a patient with GPP will be hospitalized for a flare at least once every 5 years[4]
- The reported mortality rate for GPP ranges from 2% to 16%[4]
- The most common causes of mortality include sepsis and multi-organ failure[1]

Striving for timely management

Timely, targeted treatment of GPP is critical, as inadequately treated GPP can be life-threatening.[1,15]

Available treatments[16]

GPP Flares

Treatment delays can increase the risk of mortality during a flare; timely access to FDA-approved therapies for GPP is recommended.[1]

- **First-line (FDA-approved):** Systemic biologics targeting IL-36
- **Second-line:** Other systemic biologics (targeting TNF-α or other cytokines)
- **Third-line:** Other systemic therapies, topicals, phototherapy

Chronic GPP

No consensus guidelines on the long-term management of chronic GPP exist. Patients and healthcare providers should discuss the chronic impacts of GPP, including physical and mental challenges.

Learn more about the only FDA-approved treatment for GPP

Scan to access

Key Takeaways[1,15]

- GPP is rare and frequently misdiagnosed; improved diagnostic awareness is required
- Treatment delays can increase the risk of mortality during a flare; timely access to FDA-approved therapies for GPP is recommended[1]
- Optimization of long-term GPP management, including cross-functional collaboration between dermatology, pathology, and emergency care, is necessary

AGEP, acute generalized exanthematous pustulosis; EQ-5D, EuroQol-5 Dimensions; FDA, U.S. Food and Drug Administration; GPP, generalized pustular psoriasis; IL, interleukin; QoL, quality of life.

1. Armstrong AW, et al. *J Am Acad Dermatol*. 2024;90(4):727-30. 2. Elewski B, Lebwohl MG. *J Psoriasis Psoriatic Arthritis.* 2025;10(2):58-66. 3. Puig L, et al. *J Eur Acad Dermatol Venereol.* 2023;37(4):737-52. 4. Bachelez H, et al. *Expert Rev Clin Immunol.* 2022;18(10):1033-1047. 5. Navarini AA, et al. *J Eur Acad Dermatol Venereol.* 2017;31(11):1792-99. 6. Prajapati VH, et al. *J Eur Acad Dermatol Venereol.* 2025;39(3):487-97. 7. Tetart F, et al. *J Eur Acad Dermatol Venereol.* 2024;38(11):2073-2081. 8. Fujita H, et al. *Am J Clin Dermatol.* 2022;23(Suppl 1):31-8. 9. Hawkes JE, et al. *Front Immunol.* 2023;14:1292941. 10. Rivera-Diaz R, et al. *Dermatol Ther (Heidelb)*. 2023; 13(3):673-88. 11. Jin H, et al. *J Dermatol.* 2015;42(7):674-678. 12. Krueger JG, et al. *J Clin Invest.* 2025;135(17):e188530. 13. Bhutani T, Farberg AS. *Dermatol Ther (Heidelb).* 2024;14(2):341-360. 14. Norlin JM, et al. *Ann Med.* 2024;56(1):2341252. 15. Balato A, et al. *Dermatol Ther (Heidelb).* 2024;14(1):5-13. 16. Lynde CW, et al. *Dermatol Ther (Heidelb).* 2025:15(12):3513-31. 17. Reisner DV, et al. *Am J Clin Dermatol*. 2022;23(Suppl 1):65-71.

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