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## Identifying Risk Factors of Flare(s) in Patients With SLE After Glucocorticoids (GC) Withdrawal (<7.5mg) across 1.5 Years

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### Abstract:

**OBJECTIVES:** This study aims to identify risk factors for flare occurrences in systemic lupus erythematosus (SLE) patients following glucocorticoid withdrawal, with the goal of optimizing treatment strategies, minimizing long-term damage, and improving quality of life.

**METHODS:** Data from the FORWARD Lupus Registry (FLR) (1999 to 2023), which collects biannual survey data, were analyzed. Patients included had answered at least three consecutive surveys (n = 1,085), excluding those without prednisone use records (n = 257). After removing patients with a single post-cessation record (n = 209) and missing flare data, 95 patients remained in the final analysis. Cramer's V measure was used to assess the association between the occurrence of flares and possible predictors. The Generalized Linear Fixed Model (GLFM) was used to evaluate predictors of flare occurrence (binary outcome), while the Cumulative Link Mixed Model (CLMM) assessed flare severity (ordinal outcome). Both models included random effects to account for variability at the patient level.

**RESULTS:** Of 209 patients who withdrew from glucocorticoids, 118 experienced flares. Flare frequency rose from 51.78% pre-withdrawal to 56.46% post-withdrawal, with increased severity (mean flare levels: 0.94(±0.81) post-withdrawal vs. 0.77(±0.79) pre-withdrawal). Significant risk factors for flare occurrence and severity included overall symptom severity (p < 0.001), depression, diabetes, and allergies. Protective factors included Medicare coverage (p < 0.001), reflecting improved access to care, and BMI index, suggesting the relevance of nutritional status.

**CONCLUSIONS:** Key risk factors for flares following glucocorticoid withdrawal include symptom severity, mental health, diabetic symptoms, and allergy triggers. Protective factors such as healthcare access and BMI underscore the importance of personalized disease management strategies to mitigate flare risks and improve outcomes for SLE patients.

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**Subtopic 1:** +Clinical Outcomes Assessment

**Subtopic 2:** +Prevalence, Incidence, & Disease Risk Factors

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