The primary outcome was incident BFF (inc-BFF). Follow-up started at BMD measurement (baseline) and continued until the development of the first fracture or censoring at death, loss to follow-up or end of the study. In these subjects, T-scores and pr-BFF were combined, and T-score < -2.5 in the lumbar spine (LS) or femoral neck (FN), or presence of pr-BFF was evaluated as primary osteoporosis criteria matched (pr-OP). Potential key factors for incident BFF, such as age, disease duration of RA, anti-citrullinated polypeptide antibodies (ACPA), rheumatoid factor (RF), remission rate using clinical disease activity index (CDAI), C-reactive protein, Health Assessment Questionnaire Disability Index, pain score using a visual analog scale (VAS), vector value of coordinate on X-axis (Vxy) using Joint Index Vector (JIV), body mass index (BMI), presence of comorbidities such as hyper-fallibility (Fall), lifestyle-related diseases (LSD), cognitive impairment (CI), estimated glomerular filtration rate calculated with cystatin C (eGFR_CysC), anti-osteoporotic drug administration and glucocorticoid administration, and serum albumin level (ALB) were chosen as variants. Receptor operation characteristics (ROC) curve was examined for each variant in regard to inc-BFF and the Cut-off index (COI) for each variant was determined. A Cox regression analysis with a multivariate model in the variants that had statistical significance with the ROC. Kaplan-Meier survival curve (K-M) was examined for each variant in regard to COI. Finally, the K-M study examined the chi-square test by dividing it into positive pr-OP, positive all single significant variants, and positive combined conditions, and simultaneously calculated inc-BFF rates for each subgroup. Differences in BFF rates were compared for each matching pair. Statistical significance was set at less than 5% for all statistical methods.

**Results:** A total of 239 patients were recruited. The mean age was 73.6 years and the mean follow-up period was 52.4 months. In the ROC study, pr-OP, ACPA, CDAIIR, PS-VAS, Vxy, Fall, LSD, CI, eGFR_CysC, and ALB demonstrated statistical significance with the COI of presence, 0.9 (U/mL), 0.52 (25.0 mm), 0.012, presence, presence, presence, 50.7 (ml/min/1.41m2), and 4.0 (g/dL), respectively. In these, PS-VAS, Vxy, and ALB had significant risk ratios with values of 1.04, 0.07, and 0.20, respectively. Hazard ratios of each variant in the K-M study were 3.51, 4.56, and 1.81, however, p-values were <0.001, <0.01, and 0.07 for PS-VAS, Vxy, and ALB, respectively. The BFF rate in the pr-OP and PS-VAS ≥ 25.0 subgroups were 4.5%, 12.9%, 14.7%, and 37.9% in the negative/negative, negative/positive, positive/negative, and positive/positive groups, respectively, whereas the BFF rate in the pr-OP and Vxy ≥ 0.012 subgroups were 4.3%, 8.3%, 6.3%, and 32.4% in the negative/negative, negative/positive, positive/negative, and positive/positive group, respectively. When PS-VAS and Vxy were combined to matching either of these, the BFF rate in the subgroups were 5.6%, 12.5%, 12.8%, and 49.0% in the negative/negative, negative/positive, positive/negative, and positive/positive group, respectively. When PS-VAS and Vxy were used together, the BFF rate was 13.2% in the positive/positive group, and 9.8% in the negative/positive group.

**Conclusion:** These results suggest that Vxy > 0.012 and PS-VAS > 25mm are available risk indicators for inc-BFF. The composite indicator should be more predictable.

**REFERENCES:** NIL.

**Disclosure of Interests:** None Declared.

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**AB0342:** ASSOCIATION OF GLUCOCORTICOID USE WITH HEALTHCARE UTILIZATION AMONG PERSONS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Keywords: Systemic lupus erythematosus

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**Background:** Glucocorticoids (GCs) have long been a mainstay of treatment for systemic lupus erythematosus (SLE). While GCs do provide benefit, there are potential side effects which increase with dose and duration. GC-associated adverse events have been linked to significant increased health care costs, although excess healthcare utilization due to GC events has not been examined in SLE.

**Objectives:** To examine the association of GC use and healthcare utilization.

**Methods:** Data are from FORWARD, The National Data Bank for Rheumatic Diseases, questionnaires collected from participants with physician-diagnosed SLE and no concomitant RA at 6-month vector value of coordinate on X-axis (Vxy) during 2015 – 2020. Respondents provided comprehensive health information including GC use and dosage and healthcare use during the prior 6 months. Analyses examined 6-month utilization according to GC use/non-use, as well as by GC dose (0, <5mg, 5-<10mg, ≥10mg). For GC users, data were drawn from the questionnaire in which GCs were first reported during the analysis period. Data for non-users were drawn from the first questionnaire completed during the observation period. Adjusted analyses used double selection LASSO to form the best fitting model considering the