Conclusions Men with SLE are reported to have more frequent of discoid cutaneous lupus, venous thromboses, high cumulative prednisolone dose and low adherence to hydroxychloroquine therapy. Female sex is associated with a greater frequency of oral ulcers and Sjögren's syndrome.

PO.4.86 CLUSTER ANALYSIS OF INITIAL LABORATORY FINDINGS IDENTIFIES THREE CLINICAL CLUSTERS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Purpose Systemic lupus erythematosus (SLE) is a heterogeneous disorder with diverse manifestations. This study tried to classify patients with SLE by combining laboratory values when they were classified as SLE.

Methods We performed hierarchical cluster analysis with laboratory results at the time of classification of SLE. Linear discriminant analysis was performed to construct a model for predicting the clusters.

Results The cluster analysis using data of 389 patients with SLE yielded 3 clusters with different laboratory characteristics. Cluster 1 had the youngest age at diagnosis and showed significantly lower lymphocyte, hemoglobin, platelet count and complement levels, and the highest erythrocyte sedimentation rate (ESR) and anti-dsDNA antibody. Cluster 2 showed higher white blood cell (WBC), lymphocyte and platelet, and lower ESR and anti-dsDNA antibody. Cluster 3 revealed the highest titer of antinuclear antibody and lower WBC and lymphocyte count. For 171 months follow-up, Cluster 1 showed higher number of cumulative manifestations compared to Cluster 2 and 3 with higher prevalence of malar rash, alopecia, arthritis and renal disease. In addition, the dose of glucocorticoids and the proportion taking immunosuppressive agents were higher in Cluster 1 than Cluster 2 or Cluster 3. However, damage index and mortality didn't differ significantly among 3 Clusters.

Conclusions Cluster analysis using initial laboratory results could identify 3 Clusters which had a distinct clinical characteristic in patients with SLE, with 84.5% accuracy. Although organ involvements and management patterns differ among the Clusters, damage and mortality didn't differ.

PO.4.87 RACIAL DISCRIMINATION AND TELOMERE SHORTENING: FINDINGS FROM THE BLACK WOMEN'S EXPERIENCES LIVING WITH LUPUS (BEWELL) STUDY

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Purpose Black women have the highest prevalence of systemic lupus erythematosus (SLE) in the U.S., and also experience greater severity and worse disease outcomes compared to their white counterparts. Racial discrimination may contribute to more aggressive SLE progression among Black women through physiologic channels engaged by the stress response, resulting in faster telomeric aging as indexed by the rate of leukocyte telomere length (LTL) shortening. Using longitudinal data, this study examined if racial discrimination is associated with LTL among Black women with SLE.

Methods Data were from the Black Women's Experiences Living with Lupus (BeWELL) Study, a prospective cohort study of 438 Black women, all with a validated diagnosis of SLE and living in metropolitan Atlanta, Georgia. Participants were recruited from April 2015 to May 2017. Linear regression was used to examine LTL assayed from dried blood spots collected at year 1 follow-up, measured as the relative telomere to single copy gene (T/S) ratio. Incident experiences of racial discrimination between baseline and year 1 follow-up were captured in surveys administered at 6-month and year 1 follow-up. Participants were asked how often they had experienced racial discrimination in the past 6 months in the following settings: at school; getting a job; at work; getting housing; medical care; service at a store or restaurant; obtaining credit or a loan; on the street or in a public setting; and from the police or in the courts. Models adjusted for baseline LTL, baseline lifetime racial discrimination, age, years of diagnosis, socioeconomic factors, and other health-related characteristics. Participants who died between baseline and year 1 follow-up (n=9), were missing data on LTL (n=18), and additionally were missing data on any other study variable (n=36) were excluded from analyses, resulting in a total analytic sample size of 375.

Results Examining the interaction between incident racial discrimination and age showed that compared to those reporting no new experiences of racial discrimination in the past year, the negative relationship between age and year 1 LTL was steeper among those reporting high incident racial discrimination (b=-.04, SE=.02, p=.03). The LTL shortening by age was faster among those experiencing high vs. no new experiences of racial discrimination. High racial discrimination was associated with faster LTL shortening particularly among older participants.

Conclusions Racial discrimination has been shown to be a health risk factor among Black Americans, including among Black women living with SLE. Our findings suggest that one mechanism through which racial discrimination may become biologically embedded in this population is via its impact on the telomere maintenance system. This study further demonstrates the need for anti-discrimination policies and practices—for example, in medical care as well as in other societal domains—to address racial inequities in health.

PO.4.89 HASHIMOTO'S THYROIDITIS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Purpose Hashimoto's thyroiditis is an autoimmune disease affecting the thyroid, which may or may not be accompanied by hypothyroidism. Systemic lupus erythematosus (SLE)

is a systemic autoimmune disease affecting all organ systems. The aim was to present a cohort of lupus patients who in the course of the disease presented with Hashimoto's thyroiditis.

Methods A cohort of 10 patients, female, aged 21–42 years, suffering from SLE is presented. The patients were diagnosed with lupus and were either on treatment with hydroxychloroquine or with hydroxychloroquine and prednisone. Within this cohort a female patient aged 42 years had also antiphospholipid antibodies and had suffered a stroke at the age of 36.

Results Within this cohort 6 patients had positive both anti-thyroglobulin and thyroid peroxidase antibodies, 3 patients had positive only anti-thyroglobulin antibodies and 1 patient had positive only thyroid peroxidase antibodies. Within this group, 7 patients were euthyroid and were followed up, while 3 had hypothyroidism and were on treatment with thyroxine.

Conclusion In conclusion, SLE may be accompanied by Hashimoto's thyroiditis. In another cohort a two-fold increased risk of Hashimoto's thyroiditis was observed in lupus patients. The presence of anti-Sm antibodies was found to favor this association. In another cohort hypothyroidism, subclinical hypothyroidism and subclinical hyperthyroidism accompanied by the presence of thyroid autoantibodies was observed in a group of lupus patients. It appears that lupus patients may present with Hashimoto's thyroiditis with or without hypothyroidism and should be screened for this disorder during long-term observation.

PO.4.90 REMISSION AND CLINICAL PATTERNS OF SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) IN SOUTHERN PAKISTAN: A RETROSPECTIVE COHORT STUDY

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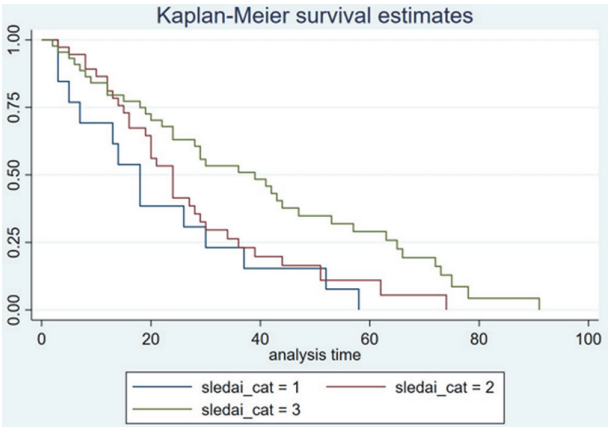
Background SLE is a difVcult to treat autoimmune disease due to clinical heterogeneity, unpredictability of disease iares and limited therapeutics. These challenges are worsened in a low-middle income country (LMIC) setting, yet clinical epidemiology from LMIC may have global beneVts.

Objectives To determine (i) the clinical pattern of SLE and (ii) the effect of SLE severity and treatment regimen on time to remission.

Methods A retrospective cohort study of 200 SLE patients' medical records (2014–20) from ImmunoCure clinic was conducted. Patients fulVlled ACR criteria 1997 for SLE classiVcation. SLEDAI-2K categories were used as outcome measure: mild (score <=6), moderate (7–10), severe (>10) to evaluate clinical pattern of SLE. Statistical analyses were performed using STATA v16.0. Kruskal-Wallis test was used for continuous measures, and Pearson's chi square test was used to compare categorical variables across SLEDAI severity. Remission status based on DORIS criteria and time to remission (>1year; n=94) was the secondary outcome.

Total doses of all drugs were calculated. Survival regression performed with Kaplan Meier curve.



Abstract PO.4.90 Figure 1

Results Most frequent antibodies are anti-dsDNA (63%), SSA (24%) and Ku (17.5%). Anti-cardiolipin (aCL) antibodies associate with severe SLE (OR = 3.6, P<0.01). Most common presentations were arthritis (85%), alopecia (53%), anemia (38%), rash (35%) and CNS disease (28%). Nephritis, CNS disease, cytopenias and oral ulcers are signiVcantly associated with severe SLE (P<0.01). ILD is in 10% of our cohort. Frequency of severe SLE was 47.5%, whereas mild disease was 16.5%. Mean duration of follow up was 41±19 months.

Every month of follow-up increased the odds of remission by 6% (P<0.05). Clinical remission on treatment (at Pred<=5mg) was successfully achieved in 62% patients. Complete remission (off all drugs & Pred) was achieved in 24 patients (14 in severe SLEDAI category) out of 200, with a mean post remission follow-up of 18 ± 15 months.. Hazard of time to remission is 61% (CI: 0.21–0.77, P=0.01) less in severe SLE as compared to mild SLE disease activity (Figure 1).

Conclusion Sustained remission is possible even in severe SLE in a LMIC setting if adequate immunosuppression is provided with persistent clinical follow-up.

PO.4.91 BANK1 AND IL-10+ B CELLS: BRINGING SOME LIGHT TO THE RELATIONSHIP BETWEEN MICROBIOTA COMPOSITION AND AUTOIMMUNITY DEVELOPMENT IN A MURINE MODEL OF LUPUS

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Background A new feature that seems to be decisive in autoimmune pathogenesis is the gut microbiota composition. However, its exact role remains to be determined. In systemic lupus erythematosus (SLE), an autoimmune disease characterized by persistent inflammation affecting multiple organs, the contribution of the gut microbiota is particularly elusive. The B cell scaffold with ankyrin repeats (Bank1) gene, which plays a role in TLR7 signalling, has been genetically associated with lupus in humans, and associated with a