three-month intervention period. Mentee outcomes of health-related quality of life, self-management (including treatment adherence), and disease progression (including disease activity, damage, and cytokine balance) will be obtained at baseline, mid-intervention (6 weeks from baseline), and immediately post-intervention (12 weeks from baseline), using validated tools. Descriptive statistics and effect sizes will be calculated to determine clinically important (>0.3) changes.

Results This study is currently in progress. Preliminary results will be shared.

Conclusions Given the success of the peer mentoring approach in other chronic conditions that disproportionately impact minorities, and its responsiveness to the needs of this unique population, this intervention could result in health improvements that have not been attainable with other interventions. This could lead to significant reductions in disparities and have considerable public health impact.

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CE-03 ORGAN-SPECIFIC SYSTEMIC LUPUS ERYTHEMATOSUS ACTIVITY DURING PREGNANCY IS ASSOCIATED WITH ADVERSE PREGNANCY OUTCOMES

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Background Previous studies have found a relationship between overall systemic lupus erythematosus (SLE) activity and adverse pregnancy outcomes. We sought to investigate whether 5 types of specific types of SLE activity either in the 6 months prior to conception or during pregnancy were related to adverse pregnancy outcome.

Materials and methods 149 pregnancies occurred in 114 women with mean age 23.7 (SD 6.8) years at SLE diagnosis and 31.0 (SD 5.3) at conception. 68% were White, 15% Hispanic, 11% Black, 7% Asian. Seven women had a history of antiphospholipid syndrome and 23 had a prior adverse pregnancy outcome. During the study period, 40 (27%) pregnancies had an adverse outcome. Cytopenias (15%) and nephritis (11%) were the most common types of SLE activity during pregnancy. In univariable analyses, nephritis 6 months before conception (OR 7.3, 95% CI: [1.5, 35.2]) and during pregnancy OR 4.4 (1.3–14.9) and cytopenias during pregnancy (OR 4.8 [1.7, 14.0]) were significantly associated with adverse outcome. Hispanic ethnicity, prior adverse pregnancy outcome, and steroid and/or azathioprine use during pregnancy were also associated with adverse outcome. In multivariable analyses, nephritis (OR 3.5 [1.0–12.2]), cytopenias (OR 4.2 [1.4,12.2]) and serositis (OR 5.7 [1.1–30.3]) during pregnancy were associated with adverse outcome (Table 1)

Results 149 pregnancies occurred in 114 women with mean age 23.7 (SD 6.8) years at SLE diagnosis and 31.0 (SD 5.3) at conception. 68% were White, 15% Hispanic, 11% Black, 7% Asian. Seven women had a history of antiphospholipid syndrome and 23 had a prior adverse pregnancy outcome. During the study period, 40 (27%) pregnancies had an adverse outcome.

Abstract CE-03 Table 1 Odds ratios for adverse pregnancy outcome (n = 40) among 149 pregnancies

Predictor	Number of occurrences	UnivariableOR (95% CI):	Model 1*OR (95% CI):	Model 2#OR (95% CI):
Organ-specific activity six months prior to conception				
Cytopenia	17	2.6 (0.8–8.5)	1.8 (0.5–6.0)	1.6 (0.5–5.4)
Nephritis	10	7.3 (1.5–35.2)	4.6 (0.9–23.4)	3.3 (0.6–17.9)
Skin disease	15	1.0 (0.3–3.9)	1.3 (0.4–5.0)	1.2 (0.3–4.8)
Arthritis	13	0.8 (0.2–3.6)	0.7 (0.1–3.2)	0.7 (0.1–3.0)
Serositis	5	1.8 (0.2–14.1)	1.6 (0.2–12.7)	1.0 (0.1–7.8)
Organ-specific activity during pregnancy				
Cytopenia	23	4.8 (1.7–13.9)	4.2 (1.4–12.2)	3.9 (1.3–11.4)
Nephritis	16	4.4 (1.3–14.9)	3.5 (1.0–12.2)**	3.6 (1.0–12.8)$
Skin disease	13	1.9 (0.5–7.1)	1.3 (0.3–5.4)	1.3 (0.3–5.2)
Arthritis	8	3.2 (0.6–16.2)	3.7 (0.8–18.5)	3.9 (0.8–19.7)
Serositis	8	4.8 (0.9–25.5)	5.7 (1.1–30.3)	5.9 (1.0–34.0)++

Adverse pregnancy outcome: pre-eclampsia, preterm <37weeks, miscarriage (fetal loss at 12–20 weeks gestation), stillbirth (fetal loss at ≥20 weeks gestation), SLE-related elective terminationOR and 95% CI: from generalised linear mixed models to account for correlated data among 114 women carrying a total of 149 pregnancies
*Model 1: adjusted for ethnicity (Hispanic/non-Hispanic) and prior adverse pregnancy outcome
#Model 2: model 1 + corticosteroid and/or azathioprine use six months before conception, and hydroxychloroquine use six months before conception
**p = 0.046 $p = 0.045 ++p = 0.049

Cytopenias (15%) and nephritis (11%) were the most common types of SLE activity during pregnancy. In univariable analyses, nephritis 6 months before conception (OR 7.3, 95% CI: [1.5, 35.2]) and during pregnancy OR 4.4 (1.3–14.9) and cytopenias during pregnancy (OR 4.8 [1.7, 14.0]) were significantly associated with adverse outcome. Hispanic ethnicity, prior adverse pregnancy outcome, and steroid and/or azathioprine use during pregnancy were also associated with adverse outcome. In multivariable analyses, nephritis (OR 3.5 [1.0–12.2]), cytopenias (OR 4.2 [1.4,12.2]) and serositis (OR 5.7 [1.1–30.3]) during pregnancy were associated with adverse outcome (Table 1).

Conclusions The majority of pregnancy outcomes were favourable in this SLE cohort. After adjusting for ethnicity, prior adverse pregnancy outcomes, and medications during pregnancy, nephritis, cytopenias and serositis disorders during pregnancy were associated with an elevated risk of adverse pregnancy outcome. Prior studies have suggested variable impact of lupus nephritis on pregnancy outcomes, but this study uniquely demonstrates an additional association between cytopenias and serositis during pregnancy and adverse pregnancy outcomes.

CE-04 SEX DIFFERENCES IN HEALTHCARE UTILISATION, END-STAGE RENAL DISEASE AND MORTALITY AMONG U.S. MEDICAID BENEFICIARIES WITH INCIDENT LUPUS NEPHRITIS

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Background Past studies suggest that males with lupus nephritis (LN) may have increased rates of end-stage renal disease (ESRD) and mortality compared to females. However studies included few males and were focused on biological differences, not healthcare use. In a nationwide cohort of SLE patients with incident LN, we investigated LN-related outcomes and utilisation by sex.
Materials and methods We used the Medicaid Analytic eXtract (MAX) with nationwide billing claims to identify individuals 5–65 years with LN (2000–2004) using a validated algorithm (PPV 80%) and required 12 months without any LN codes to define incident cases. MAX data were linked to the U.S. Renal Data System (USRDS) 2000–2006 to identify ESRD onset. Mortality was determined using National and Social Security Death Index Files (2000–2006). We assessed sex-specific incidence rates and adjusted incidence rate ratios (IRRs) for healthcare utilisation, medications, preventive care and renal biopsies using Poisson regression. We used Fine and Grey proportional hazard models to compare the subdistribution hazard ratios (HRsd) of ESRD by sex accounting for the competing risk of death, and Cox models to compare hazard ratios (HR) of death, adjusted for age and race/ethnicity.
Results Of 2576 patients with incident LN, 230 (9%) were male. Mean follow-up was 2.8 (SD 1.5) years for both sexes. Mean age was 30 (SD 16) years among males and 34 (SD 14) years among females ($p < 0.001$). 31% of males and 36% of females underwent renal biopsy ($p = 0.06$). Other than azathioprine use, which was more frequent among females ($p = 0.02$), were no differences in medications or preventive care. Adjusted rates of outpatient and emergency department (ED) visits were lower for males compared to females (IRR 0.81, 95% CI: 0.68–0.98 and 0.88, 95% CI: 0.79–0.99, respectively); hospitalizations were comparable. The five-year cumulative incidence of ESRD was 13% and the HRsd of ESRD for males compared to females was 0.86 (95% CI: 0.53–1.38) in the first two years and 2.21 (95% CI: 1.2–4.1) in the subsequent two years. The five-year cumulative incidence of death was 15% with no difference in HR by sex.
Conclusions In this incident LN Medicaid cohort, we found high rates of ESRD and mortality overall, with no differences in ESRD by sex in the first two years but more than twice the risk among males thereafter. Males had lower rates of outpatient and ED visits compared to females. Further studies are needed to understand the relationship between utilisation and long-term outcomes.
Acknowledgements Drs. Feldman and Broder contributed equally.

CE-05 A LONGITUDINAL ANALYSIS OF OUTCOMES OF LUPUS NEPHRITIS IN AN INTERNATIONAL INCEPTION COHORT USING A MULTISTATE MODEL APPROACH

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Background Patients with lupus nephritis (LN) may have improvement or deterioration in renal status over time. To capture bidirectional change we used a reversible multistate Markov model to study transitions in glomerular filtration rate (GFR) and proteinuria (PrU) in a prospective, international, inception cohort of SLE patients receiving standard of care.
Materials and methods Patients were evaluated at enrolment and annually. GFR states were defined: state 1 (eGFR: >60 ml/min); state 2 (eGFR: 30–60 mL/min); and state 3 (eGFR: <30 ml/min). Similarly, PrU states were defined: state 1 (ePrU: <0.25 gr/day); state 2 (ePrU: 0.25–3.0 gr/day); and state 3 (ePrU: >3.0 gr/day). Multistate models provided estimates of relative transition rates and state occupancy probabilities.
Results Of 1,826 SLE patients, 89% were female, 49.2% Caucasian with mean±SD age 35.1 ± 13.3 years. The mean disease duration at enrollment was 0.5 ± 0.3 years and follow-up was 4.6 ± 3.4 years. LN occurred in 700/1,826 (38.3%) patients. The likelihood of improvement in eGFR and ePrU (states 2→1 and 3→2) was greater than deterioration (states 1→2 and 2→3). After 5 years, the estimated transition to ESRD was 62% of patients initially in eGFR state 3 but only 11% from ePrU state 3. The probability of remaining in initial eGFR states 1, 2 and 3 was 85%, 11%, 3% and for ePrU was 62%, 29%, 4%. Male sex ($p = 0.04$) predicted improvement in eGFR states and older age ($p < 0.001$), race/ethnicity ($p < 0.001$), higher ePrU state ($p < 0.001$), higher renal biopsy chronicity score ($p = 0.013$) and baseline anticardiolipin antibodies ($p = 0.039$) predicted deterioration. For ePrU, race/ethnicity ($p = 0.009$), higher eGFR state ($p = 0.011$) and higher renal biopsy chronicity score ($p = 0.015$) predicted deterioration. Positive lupus anticoagulant ($p = 0.006$) and ISN/RPN class V nephritis ($p = 0.013$) were associated with lower improvement rates.
Conclusions Multistate modelling in patients with LN generates probability estimates of transitions between disease states that reflect improvement or deterioration in renal outcomes. This approach identifies predictors of change in renal status and can inform clinical trial design by identifying outcomes that new therapeutic interventions for LN should meet or exceed.
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CE-06 URINARY NEUTROPHIL GELATINASE – ASSOCIATED LIPOCALIN AND MONOCYTE CHEMOATTRACTANT PROTEIN-1 AS BIOMARKERS FOR LUPUS NEPHRITIS IN COLOMBIAN SLE PATIENTS

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Background Some previous studies in Caucasian, Asian, and African-American patients have shown that urine levels of Neutrophil Gelatinase–Associated Lipocalin (uNGAL) and Monocyte Chemoattractant Protein-1 (uMCP-1) were significantly greater in patients with LN. However, information in Mestizo and Afro-Latin American patients is very limited. Our aim was to evaluate diagnostic value of uNGAL and uMCP-1 as potential markers for the diagnosis of LN in Colombian SLE patients
Materials and methods We examined urinary levels of NGAL and MCP-1 in 93 consecutive SLE patients (ACR criteria 1982) from Hospital San Vicente Fundación, at Medellín, Colombia. uNGAL and uMCP-1 were measured by ELISA techniques (R&D system, Minneapolis, USA). In addition, serum Anti-C1q antibodies were measured (Inova, San Diego, USA). Several clinical and serological features were analysed as well as disease activity (SLEDAI). Mann-Whitney tests were used to compare data and Spearman's rho for correlations. Additionally, ROC curves relating the specificity and sensitivity profiles of the 2 biomarkers were done.