were excluded. SLE activity was assessed using the physician's global assessment (PGA; 0 to 3) at each clinic visit. Active lupus nephritis was adjudicated by a roundtable of 6 physicians. Pregnancies outcomes were compared between 3 groups:

- Inactive SLE: PGA <1.5 throughout pregnancy, no renal activity
- Active non-renal SLE: PGA at least 1.5 in pregnancy, no renal activity
- Active LN: active nephritis during pregnancy

Results Of 115 pregnancies, 70 (61%) had inactive SLE throughout pregnancy, 30 (26%) had active non-renal SLE, and 15 (13%) had active lupus nephritis during pregnancy. Women with inactive SLE were older and more likely to be White, have a college degree and private health insurance, and live with a partner (table 1). Hydroxychloroquine and aspirin were frequently prescribed to all groups. Azathioprine was more frequently prescribed for active SLE, especially active nephritis. The majority of patients with active SLE received prednisone, with or without nephritis, though at higher doses for active nephritis. Positive dsDNA and/or low complement was similarly high among women with active SLE.

The frequency of poor pregnancy outcomes, including preterm birth, preeclampsia, and low APGAR score were significantly higher among women with active nephritis (figure 1). Active non-renal SLE did not increase adverse pregnancy outcomes. Pregnancies with active nephritis delivered earlier than other pregnancies (33.2wks active nephritis, 36.5wks active non-renal, and 37.2wks inactive SLE, $p<0.0001$).

Conclusions Active lupus nephritis, but not active non-renal SLE, was associated with dramatically higher rates of adverse outcomes than inactive SLE. Differences in social determinants of health between groups could play a role both in the presence of active nephritis and worsened adverse pregnancy outcomes. This data suggests that active lupus nephritis in pregnancy is an important determinant of pregnancy outcomes and focuses our attention on the unmet medical need of these patients.

603 TRAJECTORIES OF ANTIMALARIAL ADHERENCE AMONG NEWLY DIAGNOSED RHEUMATOID ARTHRITIS AND SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS: A POPULATION-BASED COHORT STUDY

[1,2]J Antonio Avina-Zubieta, [1,3]M Rashedul Hoque, [1,2]Diane Lacaille, [1,4]Mary ADe Vera, [5]Yi Qian, [3]Lawrence McCandless, [1,3]Hui Xie, [1,2]John M Esdaile. *[1]Arthritis Research Canada, BC; [2]Division of Rheumatology, Department of Medicine, University of British Columbia (UBC); [3]Faculty of Health Sciences, Simon Fraser University; [4]Faculty of Pharmaceutical Sciences, UBC; [5]Sauder School of Business, UBC*

10.1136/lupus-2023-lupus21century.34

Background Adherence to antimalarial regimens are suboptimal in rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) patients. Also, adherence is dynamic in nature, and varies over the time. Computing a single adherence level over a period may not explain the adherence trajectories of antimalarial in RA and SLE patients over time.

Objectives To identify the groups of patients with similar patterns or trajectories of antimalarial adherence over time and evaluate the baseline determinants of the group membership of adherence trajectories.

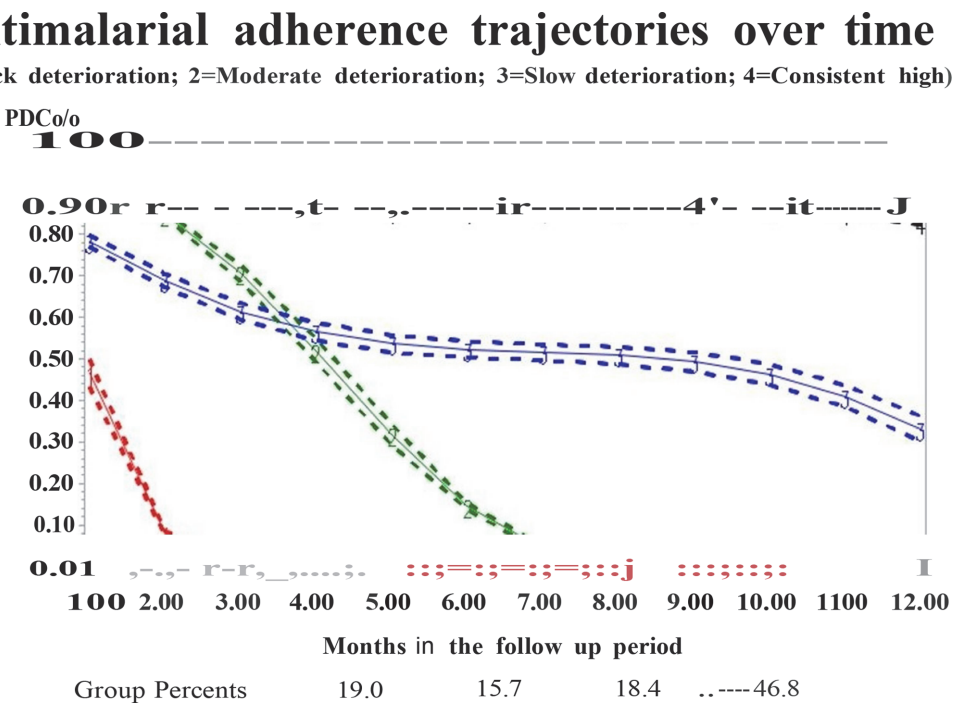
Methods All patients with incident RA/SLE and incident antimalarial use in British Columbia, Canada, between January 1997 and March 2021, were identified using previously published definitions and administrative health data. Patients were followed up for 12 months from the index date, the time when subjects met RA/SLE criteria and were on antimalarials. We calculated a measure of adherence, the proportion of days covered (PDC) for all patients each month. Then, we used group-based trajectory model (GBTM) analysis on monthly PDC values to identify the latent groups of antimalarial adherence trajectories. The number of groups was selected using the AIC and minimum percentage criterion.

Finally, we used an ordered logistic regression to evaluate the baseline determinants of the group membership of adherence trajectories. Baseline determinants of adherence for assessment included sociodemographic factors (neighborhood income quartile, region, age, sex), disease-related factors (disease type (RA vs. SLE), disease duration at index date, hypertension, angina, COPD, modified Charlson comorbidity index), healthcare system factors (hospital visits, physician and specialist visits), and medication use factors (glucocorticoids, immunosuppressives, biologics, Cox-2 selective NSAIDs).

Results We identified 27,510 patients with incident antimalarial use (23,997 RA and 3,513 SLE patients, mean ± SD age 56.8 ± 15.5 years, 74.8% female). Using GBTM analysis, we identified four groups for antimalarial medication adherence trajectories, representing an ordered pattern of antimalarial adherence from worse to better. Those trajectory groups were - Group 1: quick deterioration (19%), Group 2: moderate deterioration (15.7%), Group 3: slow deterioration (18.4%), and Group 4: consistent high adherence (46.8%) (figure 1). Significant determinants of the group membership of adherence trajectories from the ordinal logistic regression model are shown in table 1. The odds of better adherence were higher for those who, at baseline, were older, had higher income,

Abstract 603 Table 1 Determinants of belonging into better adherence trajectory groups: results from an ordinal logistic regression model including only significant factors

Factors	Adjusted odds ratio (95% CI)
Age	1.009 (1.008–1.011)
Neighborhood income quartile (Ref: 3)	
1	0.914 (0.854–0.978)
2	0.963 (0.899–1.032)
4	1.075 (1.002–1.153)
5	1.041 (0.969–1.117)
SLE vs RA	1.551 (1.444–1.665)
Have hypertension	1.068 (1.002–1.138)
Have angina	0.878 (0.776–0.995)
Have COPD	0.861 (0.761–0.975)
Rheumatologist visits	1.035 (1.022–1.048)
Glucocorticoids use	1.082 (1.033–1.134)
Immunosuppressives use	1.177 (1.117–1.239)
Cox-2 selective NSAIDs use	1.080 (1.017–1.147)
Biologics use	0.559 (0.426–0.734)



Abstract 603 Figure 1 Antimalarial adherence trajectory groups from group-based trajectory model analysis

had SLE compared with RA, had hypertension, had rheumatologist visits, and used glucocorticoids, immunosuppressives or Cox-2 selective NSAIDs.

Conclusion Among incident RA/SLE incident antimalarial users from a population-based cohort, 53.2% did not continuously adhere to the antimalarial regimen in the first year of treatment. We identified four distinct antimalarial adherence trajectory groups in this study. Sociodemographic, disease-related, healthcare system, and medication use factors associated with better adherence trajectories could help inform strategies to improve antimalarial adherence among RA and SLE patients.

604 IDENTIFICATION OF ACR GUIDELINES FOR SLE PREGNANCY CARE IN THE ELECTRONIC HEALTH RECORD

[1]Noah Forrest, [1]Joshua Waytz, [2]April Barnado, [3]Megan Clowse, [1]Theresa Walunas, [1]Rosalind Ramsey-Goldman. *[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Vanderbilt University School of Medicine, Nashville, TN; [3]Duke University School of Medicine, Durham, NC*

10.1136/lupus-2023-lupus21century.35

Introduction SLE is an autoimmune disease with an increased risk for poor outcomes in pregnancy. In 2020, ACR specified several recommendations to assist clinicians in preparing patients with SLE and other rheumatic diseases for pregnancy management, with the intention of risk reduction for both the mother and developing fetus.[1] Two recommendations that are of particular importance in managing SLE pregnancies are to initiate low dose aspirin (LDA) and continuation of hydroxychloroquine (HCQ) therapy. We investigated whether the rate of adherence to these guidelines increased after their release at a single healthcare site.

Methods We identified all patients at Northwestern Medicine (NM) with 4 or more encounters billed for SLE, with at least one SLE encounter billed by a rheumatologist. Using diagnosis and procedure codes, we ascertained the approximate start and end dates of pregnancies that occurred following the first SLE diagnosis among these patients from 2012 to 2022. Next, we identified the presence of LDA if a medication order for low dose or baby aspirin occurred from 6 months prior to the beginning of pregnancy up to the end of the first trimester. The presence of HCQ therapy was determined by medication orders for HCQ occurring either 6 months before or during the pregnancy. The presence of antiphospholipid (APL) antibodies was determined if anti-cardiolipin, anti-beta-2-glycoprotein, or lupus anticoagulant were positive on two separate

Abstract 604 Table 1 Cohort summary statistics over the study period

N Patients	505
ICD Coded SLE Encounters	
Mean (SD)	44.8 (46.9)
Median [Min, Max]	28.0 [4, 282]
Rheumatology SLE Encounters	
Mean (SD)	20.7 (23.6)
Median [Min, Max]	12 [1, 141]
Race: N (%)	
White	243 (48)
Black or African American	140 (27)
Asian	30 (5)
Other or Unknown	92 (18)
Age at First SLE Encounter	
Mean (SD)	31.1 (7.22)
Median [Min, Max]	30.9 [15.8, 58.1]
Age at First SLE Pregnancy	
Mean (SD)	31.7 (5.8)
Median [Min, Max]	31.8 [18, 45]