and risk of type 2 diabetes mellitus (T2DM) among SLE patients.

**Methods** Using a population-based database that includes all residents of British Columbia, Canada, we conducted a retrospective, longitudinal cohort study of patients with incident SLE and incident antimalarial use. We established drug courses for antimalarials – defining each new course when a 90 day permissible gap had been exceeded between refills and calculating corresponding proportion days covered (PDC). Our primary exposure was adherence to antimalarials according to three categories: 1) adherent (PDC ≥0.90); 2) non-adherent (0<PDC<0.90); and 3) discontinue (PDC=0, no drug). T2DM outcomes were defined using International Classification of Disease 9th and 10th Revision Codes, and Canadian Drug Identity Codes for anti-diabetic medication (first date of either encounter). We used multivariable Cox’s proportional hazards models with time-dependent variables to evaluate the association between adherence to antimalarials and risk of T2DM.

**Results** The study cohort included 1498 patients with incident SLE, with mean age of 44.4±14.8 years and 1360 (90.8%) women. Mean number of antimalarial prescriptions/courses over follow-up was 23.2±37.7/2.1±1.8, with mean course duration of 553.9±820.8 days. Over median 4.62 years of follow-up, we recorded 140 incident cases of T2DM. After adjusting for age, gender, comorbidities, and concomitant medications, the hazard ratio (HR) for those who were adherent to antimalarials was 0.61 (95% confidence interval [CI], 0.40–0.93) as compared to discontinuers, suggesting a protective effect of adherence to antimalarials. In contrast, the HR for those who were non-adherent was 0.78 (95% CI 0.50 to 1.22) as compared to discontinuers. Sensitivity analyses involving permutations of permissible gaps (i.e. 120, 180 days) and PDC cut-off (i.e. 0.80) did not materially change our results.

**Conclusions** These population-based data show a protective effect of adherence to antimalarials on risk of T2DM in SLE patients. Given the effectiveness of antimalarials in treating SLE as well as additional benefits, findings emphasize the need to raise awareness, among health professionals and patients with SLE, of the importance of adherence to these therapies.