

## BACKGROUND

- SLE is a serious autoimmune disease affecting multiple organs, often causing irreversible damage



- SLE commonly affects women, minorities and people of workforce-age



- Hydroxychloroquine (HCQ): cornerstone drug, used by all N. American rheumatologists
- Reduces lupus flares, but, long-term may lead to irreversible retinal damage



## OBJECTIVE

To identify predictors of SLE flares after HCQ is tapered/discontinued

## METHODS

- 5 Canadian SLE cohort patients on HCQ
- Time-zero: first HCQ taper/ discontinuation
- Comparison: patients maintaining HCQ
- Outcome: SLE flare, defined as subsequent SLE therapy augmentation, increase in disease activity, or hospitalization for SLE
- Cox regression analyses adjusting for demographic and clinical factors
- Flare rate comparison of subgroups at risk

# Personalized Comparisons of Flare Rates after Hydroxychloroquine Tapering or Discontinuation in Systemic Lupus (SLE)

Which subgroups of SLE patients are at higher risks of flares after HCQ is reduced or discontinued?



We observed that...



Subgroups at risk among patients **maintaining** HCQ:

- First-Nation
- Immunosuppressives



Subgroups at risk among patients **tapering** HCQ:

- Asian
- Active disease
- Prednisone



Subgroups at risk among patients **stopping** HCQ:

- Black
- ≤25 years at Dx

After HCQ taper/discontinuation, patients with one or more of these risk factors had about **twice** the flare rate of those with no risk factors (Table)

**SLE flare rates per 1000 person-years (95% CI)**

HCQ groups	Without risk factors	With ≥1 risk factor
Maintenance (N=621)	1.9 (1.4, 2.6)	2.8 (2.5, 3.3)
Taper (N=398)	2.8 (2.3, 3.4)	4.2 (3.6, 4.9)
Discontinued (N=395)	2.2 (1.8, 2.6)	4.2 (3.5, 5.0)

## IMPLICATIONS

- Non-Caucasians, those with SLE onset <age 25, those with more active SLE, those on prednisone are at risk for SLE flares when HCQ is tapered/stopped.
- Results may help decision-making re: whether/when to taper HCQ.
- Potential limitation:** We did **not** consider **reasons** for HCQ changes

Questions?

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