Purpose Long term immunosuppressive therapy (IST) in systemic lupus erythematosus (SLE) requires constant adjustment according to severity and organ involvement. This ongoing study aims to implement hydroxychloroquine therapy, reduce unnecessary IST, while achieving disease remission without worsening damage.

Methods A 3Rs strategy (Reduction, Replacement and Refinement) was implemented and therapy adjusted considering overall disease activity and safety profile. SLE patients from a single centre were followed between January 2013 and July 2017. Inclusion criteria: ACR criteria fulfillment; diagnosis from >1 year. Demographic and clinical features were registered at inclusion; SLEDAI-2K, therapy and flares recorded at inclusion and at each visit. SLICC damage index was calculated at inclusion and at the end. Data were analysed using SPSS.

Results At inclusion (n=79), 94% were females, median age 45 (IQR 39–57), mostly Caucasians (89%). Median disease duration was 13 (IQR 7–20). SLEDAI-2K at inclusion was <3 (inactive disease) in 63 (80%). Patients with active disease (SLEDAI-2K >3) at baseline were younger, with less disease duration, not enriched for a specific phenotype. Percentages of azathioprine and mycophenolate were reduced from 35 and 8 to 23 and 6, respectively, similar to interim results (39 months); hydroxychloroquine use remained >70% (10 discontinuations due to retinopathy). In contrast, steroids were steadily reduced from 68% to 42% and are now used at <6 mg/day in 22/33 patients. Importantly, steroid reduction or withdrawal rate was significantly higher in inactive disease group. Belimumab was maintained in 8 patients. Flare occurrence was higher in active disease patients (73% vs 17%, overall 27%). Most episodes were mild. Patients with flares were younger, with higher SLEDAI-2K and steroid dose at inclusion. No treatment discontinuation was associated with flare, except for azathioprine, mostly stopped due to safety profile. During the study, median SLICC damage index augmented from 0 to 1, frequently in the ophthalmological domain. Three patients died and ten were lost to follow-up from 39 to 54 months.

Conclusions The 3Rs strategy allowed to reduce unnecessary IST, especially in low disease activity group. Flares rates were in accordance to recent reports. In a long term perspective, our quest to reduce steroid burden seems promising.

Background/purpose Despite effectiveness and favourable safety profile, antimalarials have the potential to cause irreversible macular retinopathy. Screening methods have evolved over the last decade and the optimal dose of hydroxychloroquine (HCQ) is now set at under 5 mg/kg real body weight. HCQ in Portugal comes only as a 400 mg pill and in 10 pills per package, which is neither friendly for optimising safe dosing nor for promoting compliance. This study aims to test the frequency of retinal hydroxychloroquine toxicity in a single-centre cohort.

Methods Cross-sectional study conducted between January-2016 and May-2017, of a convenience sample of chronically compliant and well characterised patients. The screening strategy consisted of automated threshold visual fields and objective test: spectral-domain optical coherence tomography, fundus autofluorescence and multifocal electroretinogram. Toxicity was diagnosed on the basis of compatible visual fields defects together with at least one positive objective test. Univariate statistical analysis was performed using the Wilcoxon Mann-Whitney (WMW) and Chi-Square (CS) tests for non-parametric distributed data.

Results Of the 62 patients screened, 32 (51%) had no prior ophthalmological examination. Median age was 46 years (y), IQR 37–60; range 27–83; 59 (95%) were female; the majority, 28 (45%) took HCQ due to SLE, 4 (6%) for Sjögren syndrome, 12 (19%) for UCTD, 11 (18%) for incomplete/cutaneous forms of lupus and 7 (11%) for other CTD. No patient had concomitant renal or liver disease. Median duration and cumulative dose were respectively 8 y (IQR 3–12); range 0.4–31 and 1168 g (IQR 584–2044; range 36–8760). Retinal toxicity was confirmed in 6 SLE and 1 non-SLE patient; in all HCQ was stopped (2/7 screen-naïve; 1/7 on tamoxifen; 1/7 with visual loss). Toxicity correlated to disease (p=0.003) and HCQ therapy (p=0.002) duration, cumulative HCQ dose (p=0.001) and SLE (p=0.04). Table 1 dose adjustments were performed in 13 patients.

Conclusion Using a standardised referral protocol for HCQ retinopathy screening led to cessation of therapy due to toxicity (11%) and adjustment of daily dosing (21%). This study highlights that regular adjustment of dose and retinal toxicity screening is mandatory in patients on prolonged HCQ therapy and reinforces lobbying for more flexible dosages. In addition, HCQ toxicity raises the need for alternative therapies in patients with CTD.