

# Rheumatoid Arthritis Patients Taking Hydroxychloroquine – Eye Exam in Last 12 Months

## CLINICAL RATIONALE

- Retinopathy has been reported with hydroxychloroquine use, including short-term therapy.<sup>1-5</sup> Rates of ocular toxicity range from 1 percent to as high as 7.5 percent for those with long-term use.<sup>5</sup> Screening is aimed at detection of toxicity to avoid irreversible and serious visual loss.
- The pharmaceutical manufacturer recommends ophthalmologic exams at baseline and every three months with prolonged therapy.<sup>1</sup>
- The American Academy of Ophthalmology (AAO) recommends a baseline eye exam when starting hydroxychloroquine with annual retinopathy screening after five years of medication use. Annual screening throughout treatment is recommended in patients with risk factors for retinal toxicity or suspicion of early toxicity. Risk factors for retinal toxicity include the following: age, genetics, high cumulative or daily dose, kidney or liver dysfunction or retinal maculopathy.<sup>2</sup> Although these risk factors are important to consider, there are reports in the literature of retinal toxicity associated with short-term use in otherwise low-risk individuals.<sup>3</sup>
- The American College of Rheumatology (ACR) recommends a baseline exam within the first year of treatment, followed by an exam after five years or, if risk factors are present as defined in the AAO guidelines, annually.<sup>4</sup>

Based on this information, the consensus opinion of experts is the primary source of our recommendation for an annual eye examination at minimum for patients taking hydroxychloroquine longer than 270 days. Rationale for an annual eye exam includes the following:

- Claims data alone does not clearly identify the start date for patients taking hydroxychloroquine nor the total duration of treatment. Therefore, it is not possible to accurately identify, through claims, patients who have been on hydroxychloroquine for more than five years.
- The AAO and ACR guidelines do not define the specific risk factors or indicators of early toxicity that would warrant annual screening within the initial five years of treatment.
- Screening is aimed at early detection of toxicity to avoid irreversible and serious visual loss. Early identification and intervention through screening can prevent permanent visual impairment.



## MEASURE AT A GLANCE



### Applicable specialties

Rheumatology



### Original measure steward

Optum® Symmetry®  
EBM Connect®



### Measure description

Patient(s) with rheumatoid arthritis taking hydroxychloroquine who had an eye exam in the last 12 reported months



Humana®

# Rheumatoid Arthritis Patients Taking Hydroxychloroquine – Eye Exam in Last 12 Months

- Screening is not invasive.
- The literature includes individual cases with retinal toxicity at low cumulative doses or within the first few years of hydroxychloroquine use.<sup>3</sup>
- A recent study demonstrated a clear gap in care relative to compliance with the 2011 AAO screening guidelines, with only 55 percent of patients receiving an appropriate evaluation. This finding included non-compliance with the type of screening test recommended in the AAO guidelines.<sup>5</sup>
- The ideal screening time frame and exact risk factors remain unclear. The AAO acknowledges its recommendations are minimal screening guidelines and providers will individualize the screening approach based on patient-specific factors.<sup>2</sup>

---

<sup>1</sup> 4-Aminoquinoline compounds. Drug Facts and Comparisons. eFacts [online]. 2015. Available from Wolters Kluwer Health, Inc. Accessed Sept. 14, 2015.

<sup>2</sup> Marmor MF, Kellnar U, et al. Revised recommendations on screening for chloroquine and hydroxychloroquine retinopathy, a report by the American Academy of Ophthalmology. Ophthalmology 2011Feb;118(2):415-22.

<sup>3</sup> Phillips BN, Chun DW. Hydroxychloroquine retinopathy after short-term therapy. Retin Cases Brief Rep 2014 Winter; 8(1):67-69.

<sup>4</sup> Saag KG, et al. American College of Rheumatology 2008 recommendations for the use of nonbiologic and biological disease-modifying antirheumatic drugs in rheumatoid arthritis. Arthritis Rheum 2008 June;59(6):757-9.

<sup>5</sup> Adrian AU, et al. Hydroxychloroquine screening practice patterns within a large multidisciplinary ophthalmic practice. Am. J Ophthalmol. 2015 Sep;160(3):561-568.

