

# Therapeutic Tinted Soft Contact Lenses for Glare Secondary to Dysphotopsias and Pigmentary Glaucoma



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## Introduction

- A 68 year-old male presented to the Contact Lens clinic for a tinted soft contact lens fitting to address his glare symptoms.
- The patient was previously diagnosed with glare as a result of dysphotopsias and secondary pigmentary glaucoma, both sequelae from cataract surgery.

## Timeline and Case History

- Spring 2014: uncomplicated cataract surgery (CE/IOL) OU
- Symptomatic for glare shortly after CE/IOL OU although normal post-operative findings
- Fall 2016: IOPs of 12/38 with diffuse pigment noted on the corneal endothelium, anterior/posterior faces of the IOL, and within the trabecular meshwork OS.
- WNL OD
- Diagnosed with secondary pigmentary glaucoma OS and started on dorzolamide and latanoprost OS.
- Referred for tinted contact lens fitting.
- Ocular history: Meridional amblyopia OS>OD,
- H/O childhood strabismus surgery

## Clinical Examination & Imaging

### Best Corrected Visual acuity

With spectacles: 20/40+1 OD, 20/40-2 OS  
With contact lenses: 20/30-2 OD, 20/40 OS

### Pertinent Anterior Segment Findings:

	OD	OS
Cornea	Trace endothelial pigment	Diffuse endothelial pigment
Iris	Flat, without transillumination defects (TIDs)	Diffuse Iris atrophy with large mid-peripheral TIDs, small non-pigmented iris nodule at 5oc1'
Lens	PCIOL, trace posterior capsular opacification (PCO)	PCIOL, diffuse pigment on the IOL with small central clear zone within pigmented area (Figure 5)

### Pertinent Posterior Segment Findings:

	OD	OS
Optic Nerve	C/D: 0.4R, pink and intact rims	C/D: 0.75R, pink but thin superiorly/inferiorly
Retinal Nerve Fiber Layer (RNFL) OCT	Borderline thin inferior quadrant, but all other sectors within norms	Diffuse RNFL thinning consistent with glaucomatous damage secondary to pigmentary glaucoma

Figure 1. No lens

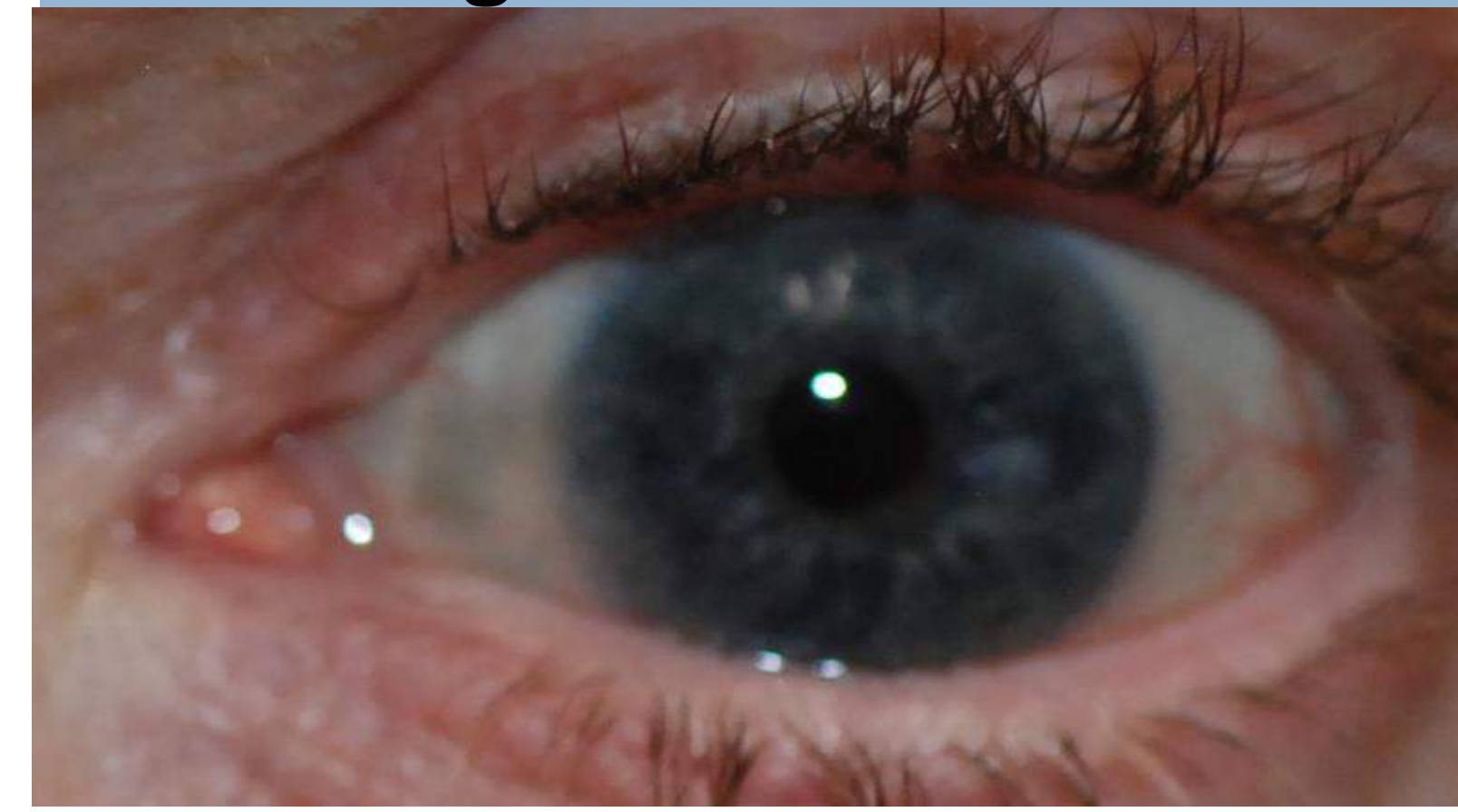


Figure 2. Gray-Green Lenses



Figure 3. Amber Lenses



Figure 4: Green Lenses



Fitting	Color	Subjective Response
Patient's normal iris color (Figure 1)	Blue OU	Very photophobic
Initial Fitting	Suntac 50% Intensity	Tint reduced glare, but too dark for ambient lighting
Second Fitting	Suntac 25%	Tint reduced glare, but still too dark for ambient lighting
Third Fitting (Figure 2)	Gray-Green Tint	Tint reduced glare, but still too dark for ambient lighting
Fourth Fitting (Figures 3 and 4)	Green Tint Amber Tint	Green too light Amber provided the best balance

## Overall Subjective Response

- The patient reported significant improvement in his visual comfort and glare reduction with all tinted soft contact lens trials.
- Overall, the patient was most satisfied with the amber lenses as these provided the best visual comfort on both cloudy and bright days, significantly reducing his photophobia.

Figure 5. PCIOL OS

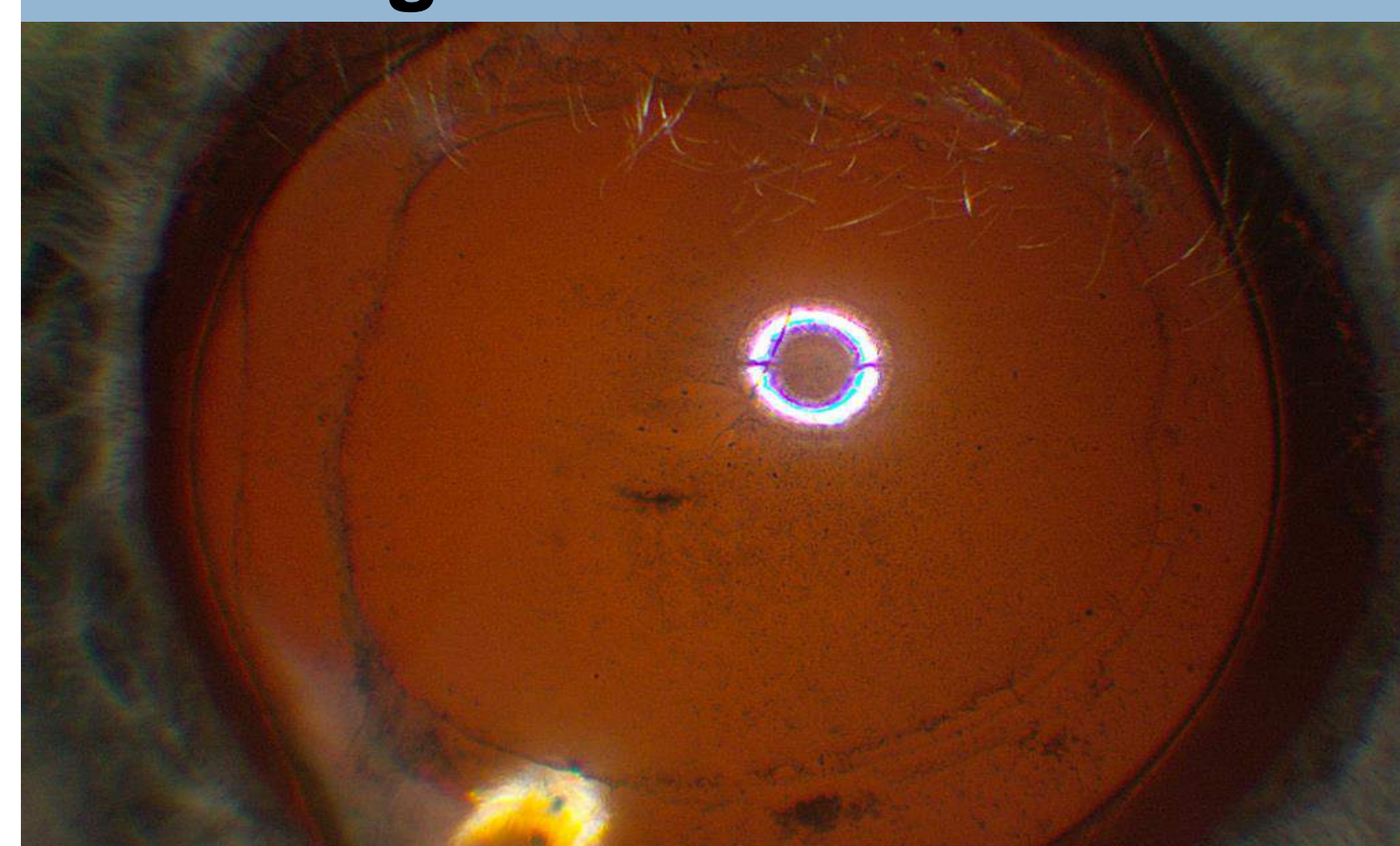
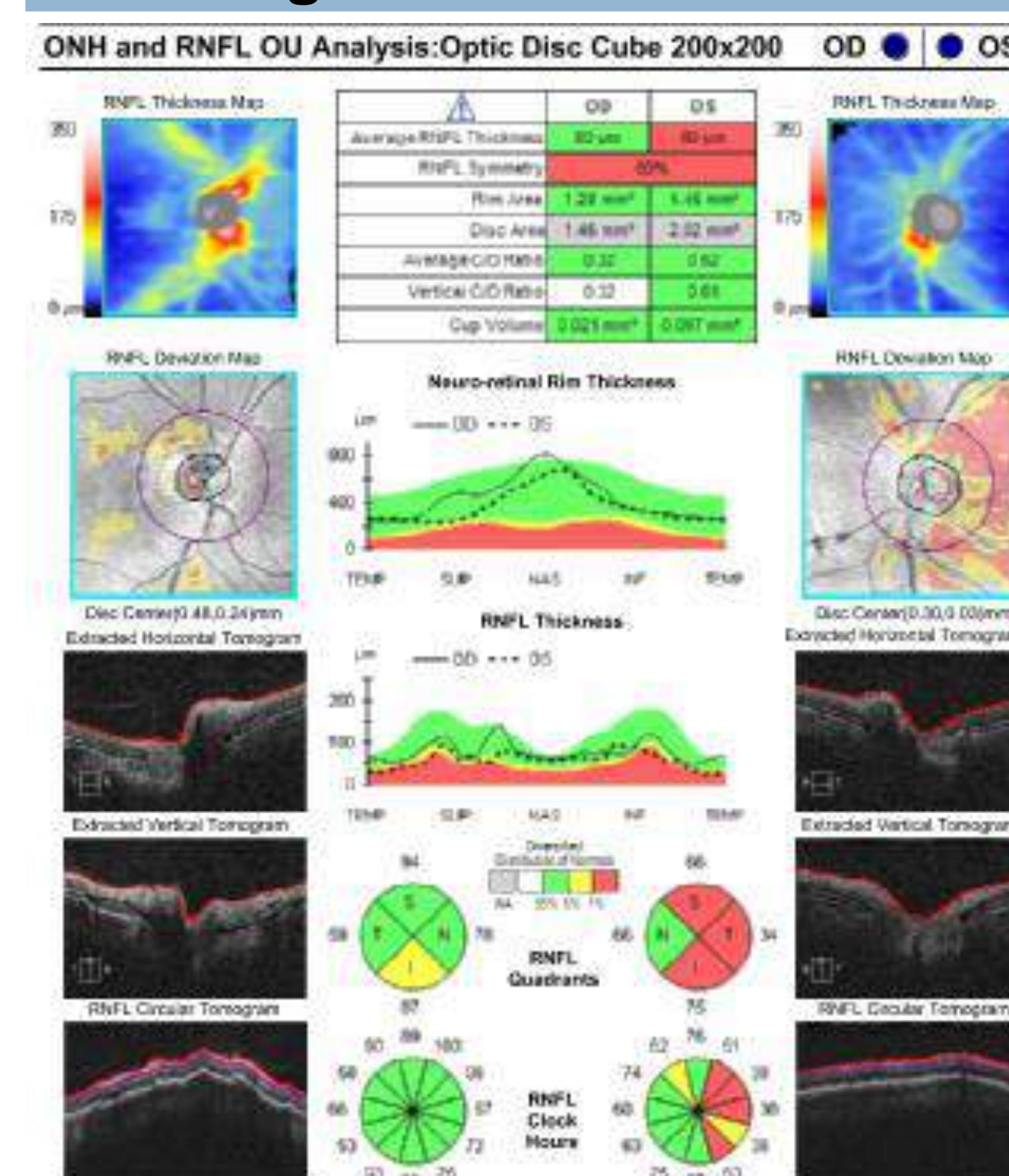


Figure 6. Optic Nerve OS



Figure 7. RNFL OCT



## Discussion

- There are isolated case reports of a secondary pigment dispersion occurring secondary to prophylactic intracameral moxifloxacin during cataract surgery<sup>4</sup>
- Dysphotopsias are a frequent sequelae after cataract surgery as **up to 50% of patients** may experience this phenomenon.<sup>3</sup>
- Positive dysphotopsia (PD)** comprise most cases of symptoms of "bright arcs, streaks and halos," and are thought to occur secondary to reflected light off the edge of the lens implant.<sup>2,3</sup>
- Negative dysphotopsia (ND)** are less common and generally consist of symptoms of, "dark shadows or crescents," with proposed etiologies including square-edged IOLs and higher index of refraction, however the exact mechanism remains unclear.<sup>1,2</sup>
- Both PD and ND may persist after the post-operative period in 2-3% of patients.<sup>3</sup>

## Conclusion & Clinical Pearls

- Tinted contact lenses can be considered as a therapeutic option to address patient's complaints of glare and/or light sensitivity
- An initial tint assessment with tinted fit-over sunglasses may be beneficial to trial a patient's subjective visual comfort to different lighting conditions and environments prior to therapeutic contact lens fit.
- It is important to educate patients symptomatic of glare that dysphotopsias post-cataract surgery are a known adverse event.

## References

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