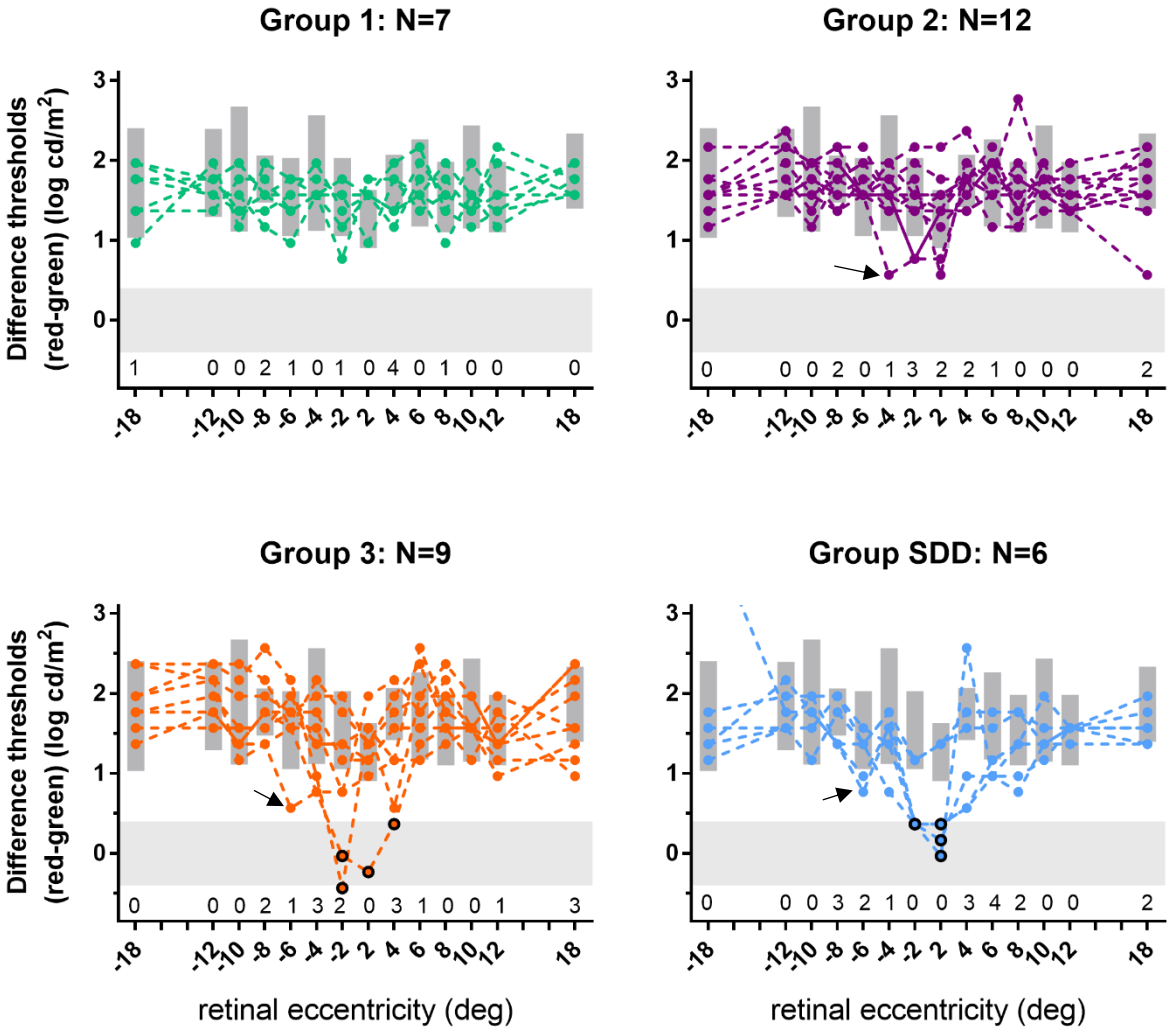
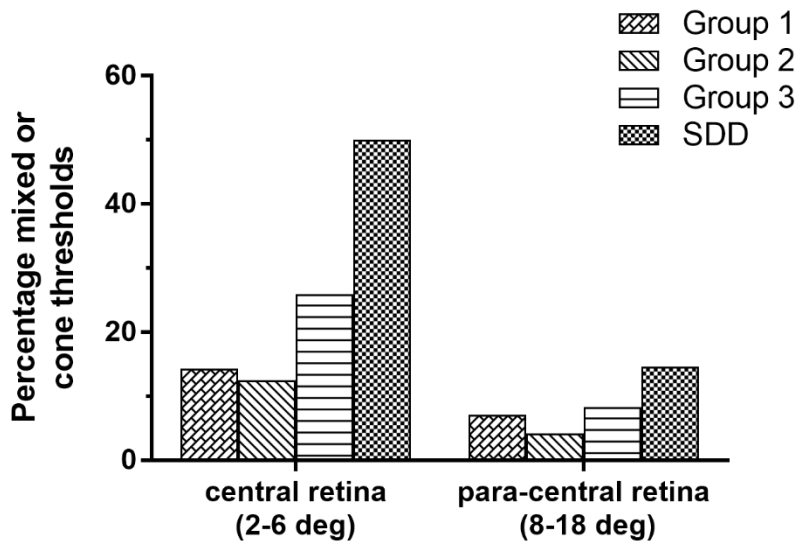
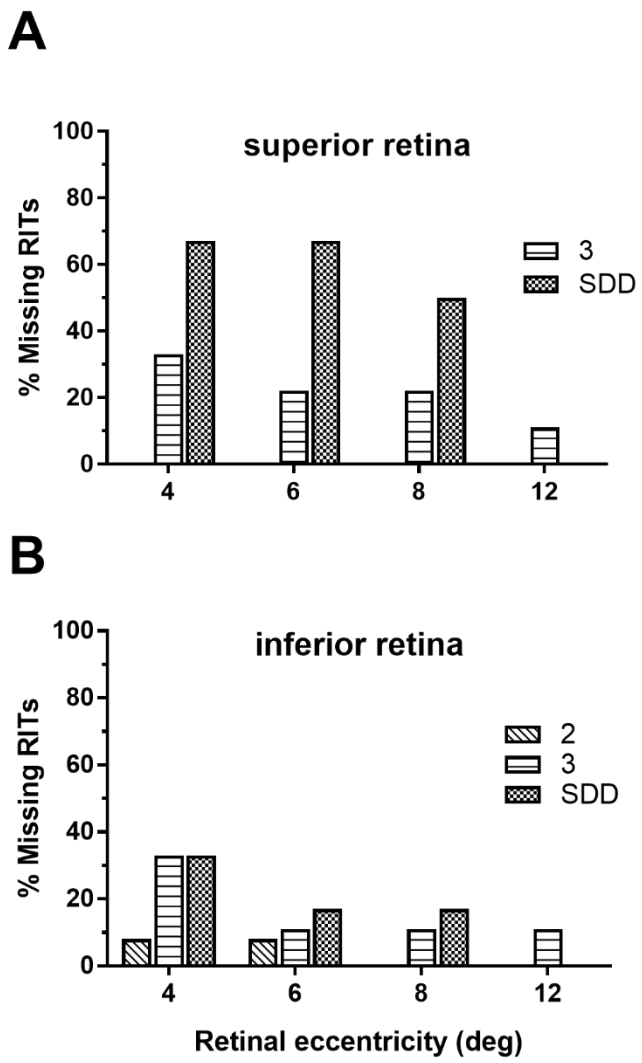


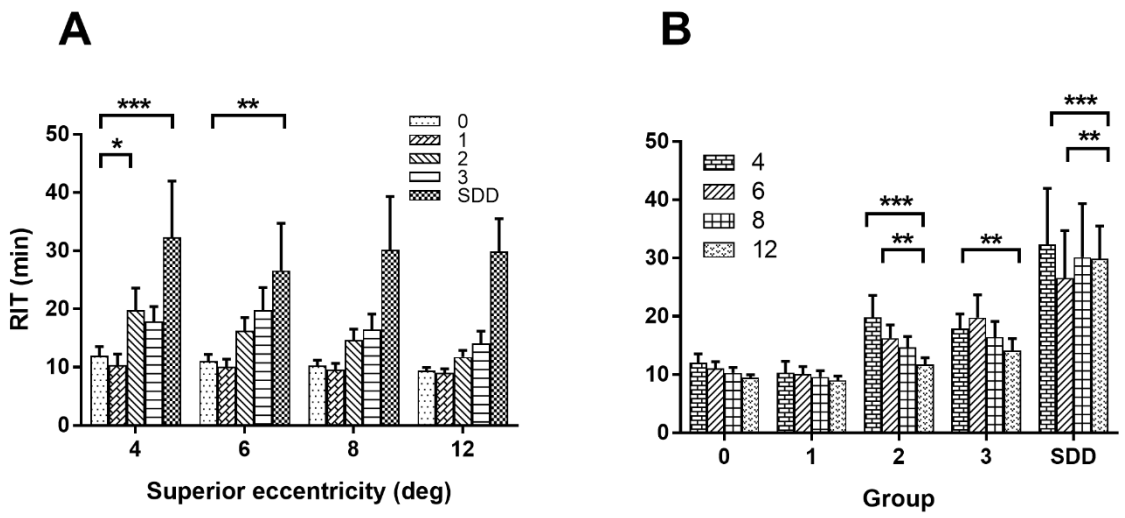
Supplemental Data Figure 1: Individual participant threshold differences (red minus green) plotted as a function of eccentricity for AMD severity groups 1, 2, 3, and SDD. Vertical gray bars indicate the reference ranges (Group 0 mean ± 2 SD) for the threshold differences at each retinal eccentricity. A threshold difference within the reference range indicates that DA thresholds to both red and green stimuli are mediated by rods. The horizontal gray band at the bottom covers ±0.4 log cd/m^2 (4dB) and represents the region where thresholds to both red and green stimuli are mediated by cones. A threshold difference greater than 0.4 log cd/m^2 but below the reference range (arrows) indicates a mixed response when DA thresholds to the green stimuli are mediated by rods and thresholds to the red stimuli are mediated by cones. The numbers at the bottom of each panel indicate the number of participants at each eccentricity who had a mixed response. The black circles in the Group 3 and SDD panels indicate that scotopic thresholds were mediated solely by cones. Negative eccentricities correspond to the inferior retina, positive eccentricities to the superior retina.



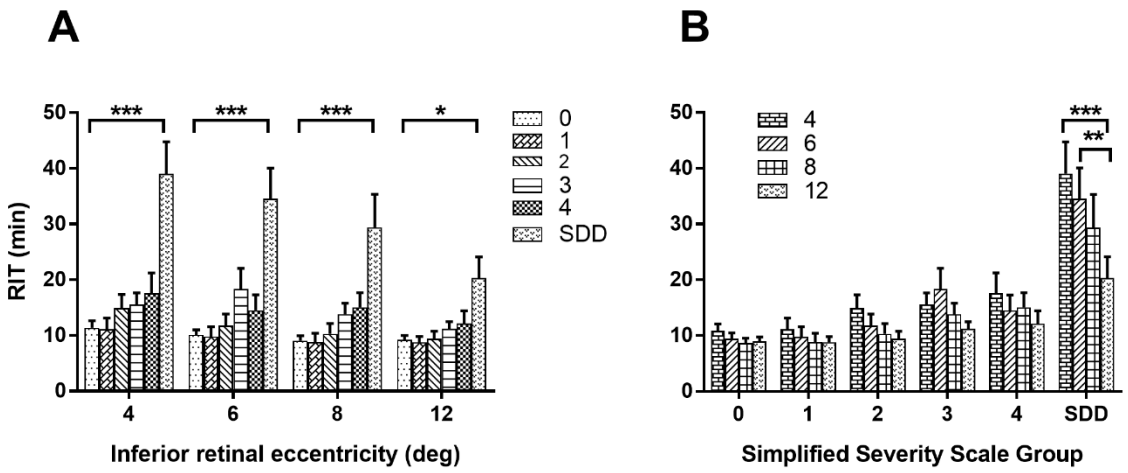
Supplemental Data Figure 2. Bar graph showing a higher percentage of loci mixed/cone thresholds were present in the central retina loci (2^o-6^o) compared with the paracentral retina (loci at 8^o-18^o). Within the central retina, rod function was more affected with increasing AMD severity as indicated by the increasing proportion on loci with mixed or cone only responses.



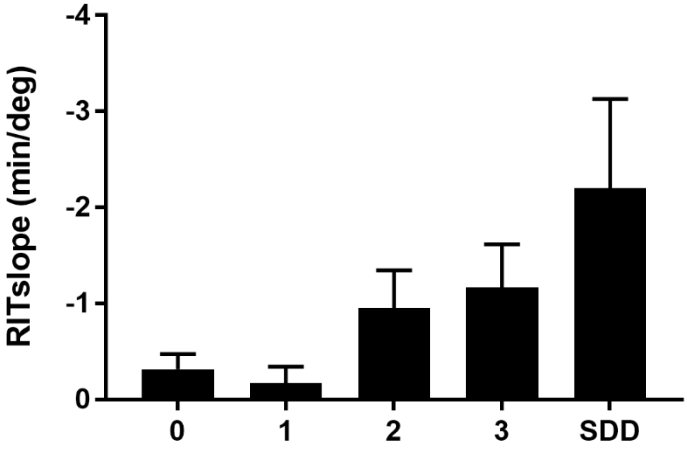
Supplemental Data Figure 3. A bar graph showing the percentage of RIT that could not be determined (as the thresholds did not recover to the criterion level) as a function of retinal eccentricity stratified by AMD severity group from the superior retina (**A**) and inferior retina (**B**). Thresholds did recover to criterion level at all loci for AMD Groups 0 or 1 and for superior loci for Group 2. Group3 and SDD eyes, had a considerably higher number (1.5-3 fold) of loci where RIT could not be derived compared with the inferior retina



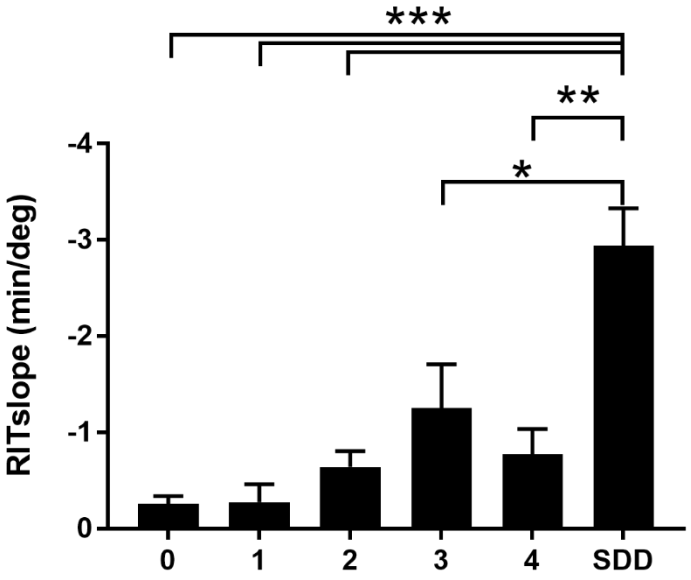
Supplemental Data Figure 4. RIT shown as a function of retinal eccentricity and AMD group**. A:** Mean RIT plotted as a function of eccentricity from the superior retina and stratified by AMD severity group (see legend). An analysis correlating RIT with AMD group severity and eccentricity reveals a significant effect of both AMD and eccentricity on RIT (two-way ANOVA of RIT with AMD group (P=0.014) and eccentricity (P<0.0001)). Number of subjects with complete data for 2-way ANOVA were Group 0 n=8, Group 1 n=7, Group 2 n=12, Group 3 n=6, and SDD n=2. Post-hoc comparisons to Group 0 by eccentricity: *P<0.05, **P<0.01, ***P<0.0001. **B:** Mean RIT plotted as a function of AMD severity group and stratified by superior retinal eccentricity. Post-hoc comparisons of RIT at 4°, 6° and 8° relative to 12° by Group; **P<0.01, ***P<0.0001. Errors bars in both graphs indicate standard error of the mean (SEM).



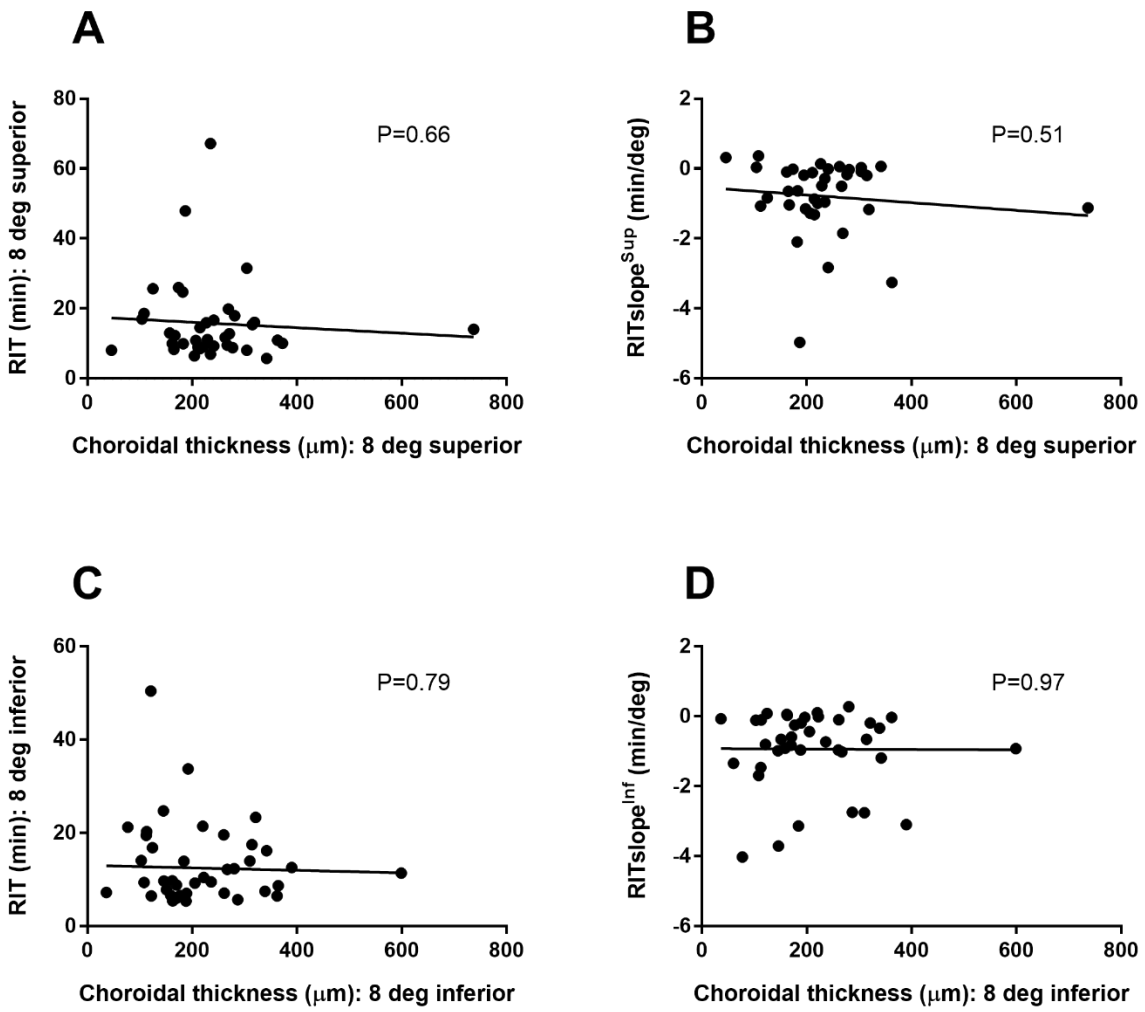
Supplemental Data Figure 5: RIT shown as a function of retinal eccentricity and AMD simplified severity scale. **A:** Mean RIT plotted as a function of eccentricity from the inferior retina and stratified by AMD simplified severity group. An analysis correlating RIT with AMD simplified severity scale and eccentricity reveals a significant effect of both AMD and eccentricity on RIT (two-way ANOVA of RIT with AMD group (P=0.0002) and eccentricity (P<0.0001)). Post-hoc comparisons to Group 0 by eccentricity: *P=0.009, ***P<0.0001. **B:** Mean RIT plotted as a function of AMD simplified severity scale group and stratified by superior retinal eccentricity (see legend). Post-hoc comparisons of RIT at 4°, 6° and 8° relative to 12° by simplified severity group; **P=0.0009, ***P<0.0001. Errors bars in both graphs indicate standard error of the mean (SEM).



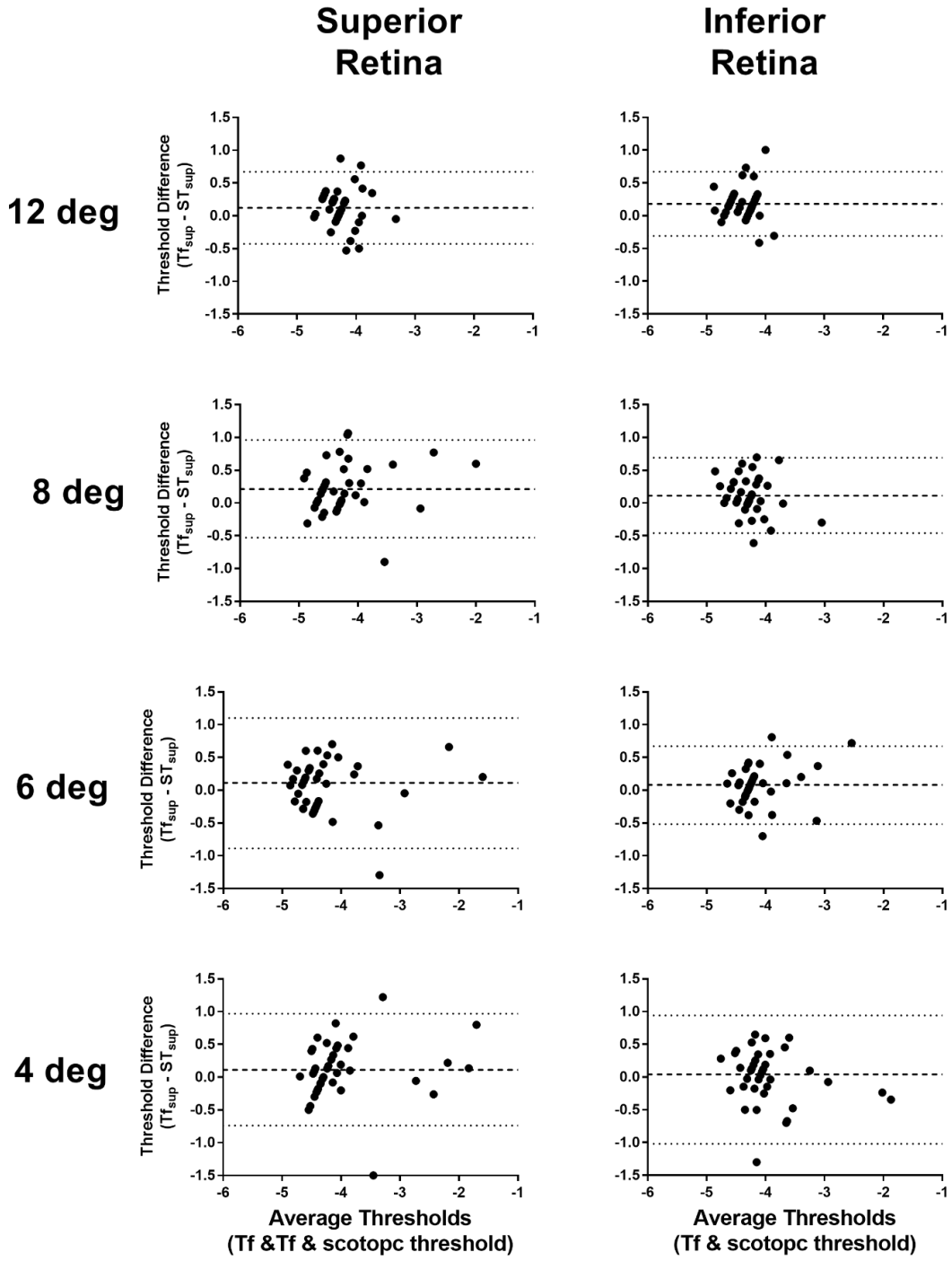
Supplemental Data: Figure 6. A bar graph showing mean RITslope^{Sup} from the superior retina for each AMD severity group. A one-way ANOVA for the effect of AMD group severity was not significant (P=0.08). Number of subjects in which RITslope^{Sup} could be calculated: Group 0 n=8, Group 1 n=7, Group 2 n=12, Group 3 n=7, SDD n=2. Error bars indicate SEM.



Supplemental Data Figure 7: RITslope^{Inf} increases as a function of AMD simplified severity scale (ANOVA: P<0.0001) Comparisons to Group SDD: ***P=0.0001; ***P=0.0008; *P=0.002; Error bars indicate SEM.



Supplemental Data: Figure 8. RIT_8^{Sup} (**A**) and RIT_8^{Inf} (**C**) plotted as a function of choroidal thickness measured at 8° eccentricity from the superior and inferior retina respectively. Plot of $RITslope^{Sup}$ (**B**) and $RITslope^{Inf}$ (**D**) plotted as a function of choroidal thickness measured at 8° eccentricity from the superior and inferior retina respectively.



Supplemental Data: Figure 9 Bland-Altman plots comparing scotopic thresholds with the final thresholds (Tf) obtained from the fits of the dark adaptation curves (Appendix 1). Mean ± standard deviation differences (Tf-scotopic threshold log cd/m^2) were **Superior retina**: 12^o: 0.125 ± 0.281; 8^o: 0.212 ± 0.379; 6^o: 0.116 ± 515; 4^o: 0.114 ± 0.439; **Inferior retina**: 12^o: 0.180 ± 0.251; 8^o: 0.113 ± 0.292; 6^o: 0.080 ± 0.304; 4^o: -0.042 ± 0.499.