

Supplementary Online Content

Sun JK, Lin MM, Lammer J, et al. Disorganization of the retinal inner layers as a predictor of visual acuity in eyes with center-involved diabetic macular edema. *JAMA Ophthalmol*. Published online July 24, 2014. doi:10.1001/jamaophthalmol.2014.2350

eTable 1. Change in logMAR VA Over 8 Months versus Change in Optical Coherence Tomography (OCT) Parameters Over 8 Months

eTable 2. Linear Regression Analysis of Relationship Between logMAR VA at 8 Months and Baseline Optical Coherence Tomography (OCT) Parameters

eFigure 1. Scatterplots Demonstrating Relationship Between DRIL and VA

eFigure 2. Example of DRIL Regression Over 8 Months

eFigure 3. Scatterplot Demonstrating Change in DRIL Extent Over Time versus Baseline DRIL Extent

This supplementary material has been provided by the authors to give readers additional information about their work.

Change in LogMAR VA from Baseline to 8 months vs. Change in OCT Parameters from Baseline to 8 months			
Change in Parameter (per unit increase for point estimates or units for means)	Bivariate Linear Regression Results		
	Point Estimate	95% confidence interval	p value
Central subfield thickness (100µm)	0.09	0.06 to 0.12	<.0001
Average DRIL (100µm)	0.03	0.02 to 0.04	<.0001
Any cysts (B-scan)	0.01	0.00 to 0.02	0.10
Small cysts (B-scan)	0.01	0.00 to 0.03	0.10
Medium cysts (B-scan)	0.01	0.00 to 0.02	0.08
Large cysts (B-scan)	0.02	0.00 to 0.03	0.01
Epiretinal membrane (B-scan)	-0.01	-0.04 to 0.01	0.32
Hard exudates (B-scan)	0.01	-0.01 to 0.02	0.30
Dot hyperreflective foci (B-scan)	0.01	0.00 to 0.01	0.06
Microaneurysms (B-scan)	-0.02	-0.06 to 0.02	0.29
Subretinal fluid (B-scan)	0.04	0.02 to 0.07	<0.001
Average ELM disruption (100µm)	0.01	-0.01 to 0.02	0.25
ELM reflectivity (arbitrary units)	0.06	-0.40 to 0.53	0.77
COST visible (B-scan)	-0.02	-0.04 to -0.01	<0.01
Average EZ disruption (100µm)	0.02	0.00 to 0.04	0.07
EZ reflectivity (arbitrary units)	-0.54	-0.90 to -0.18	<0.01

eTable 1. Change in logMAR VA over 8 months versus change in optical coherence tomography (OCT) parameters over 8 months. Results from bivariate linear regression models with repeated measures analysis adjusting for correlations between eyes from the same individual are reported.

*p < 0.05. VA worsened = logMAR VA at 8 months > baseline logMAR VA. VA stable or improved = logMAR VA at 8 months ≤ baseline logMAR VA. SD = standard deviation. LogMAR = logarithm of the minimum angle of resolution. VA = visual acuity. DRIL = disorganization of retinal inner layers. ELM = external limiting membrane. COST = cone outer segment tips. EZ = ellipsoid zone.

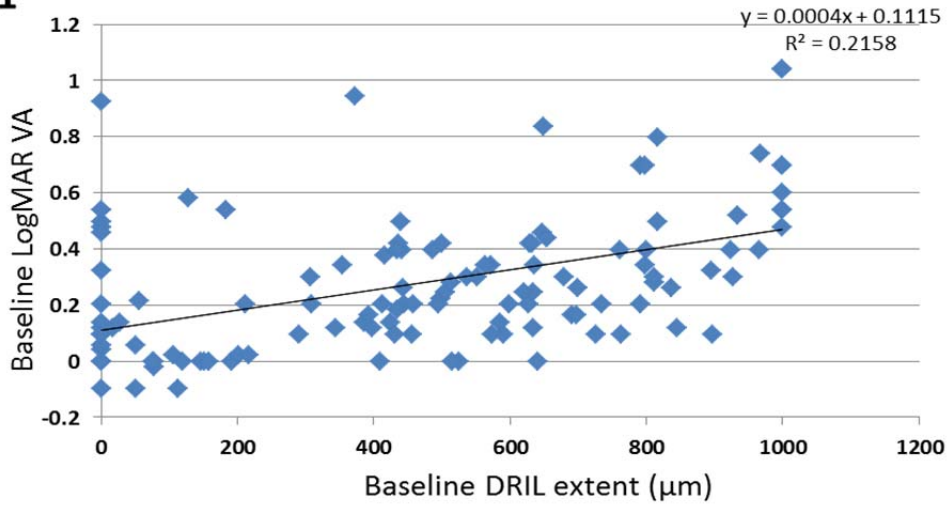
LogMAR VA at 8 months vs. Baseline OCT Parameters				
Parameter (units)	Point Estimate	95% confidence interval	p value, bivariate analyses	p value, multivariate analyses adjusting for baseline VA
Central subfield thickness (100µm)	0.02	0.02 to 0.11	<0.01	0.90
Average DRIL (100µm)	0.03	0.01 to 0.04	<0.001	0.87
Any cysts (B-scan)	0.02	0.00 to 0.04	0.04	0.31
Small cysts (B-Scan)	0.02	0.00 to 0.04	0.10	0.53
Medium cysts (B-scan)	0.01	-0.01 to 0.03	0.30	0.54
Large cysts (B-scan)	0.02	0.00 to 0.04	0.09	0.67
Epiretinal membrane (B-scan)	0.02	-0.01 to 0.05	0.14	0.59
Hard exudates (B-scan)	0.00	-0.01 to 0.02	0.63	0.57
Dot hyperreflective foci (B-scan)	0.00	-0.01 to 0.01	0.59	0.90
Microaneurysms (B-scan)	-0.02	-0.06 to 0.03	0.50	0.99
Subretinal fluid (B-scan)	0.06	-0.04 to 0.05	0.78	0.49
Average ELM disruption (100µm)	0.03	0.01 to 0.05	<0.01	0.59
ELM reflectivity (arbitrary unit)	0.06	-0.70 to 0.81	0.88	0.23
COST Visible (B-scan)	-0.02	-0.04 to 0.01	<0.01	0.94
Average EZ disruption (100µm)	0.03	0.01 to 0.05	0.01	0.81
EZ reflectivity (arbitrary unit)	-0.79	-1.19 to -0.39	<0.001	0.29

eTable 2. Linear regression analysis of relationship between logMAR VA at 8 months and baseline optical coherence tomography (OCT) parameters. All analyses utilized repeated measures to adjust for correlations between eyes from the same individual.

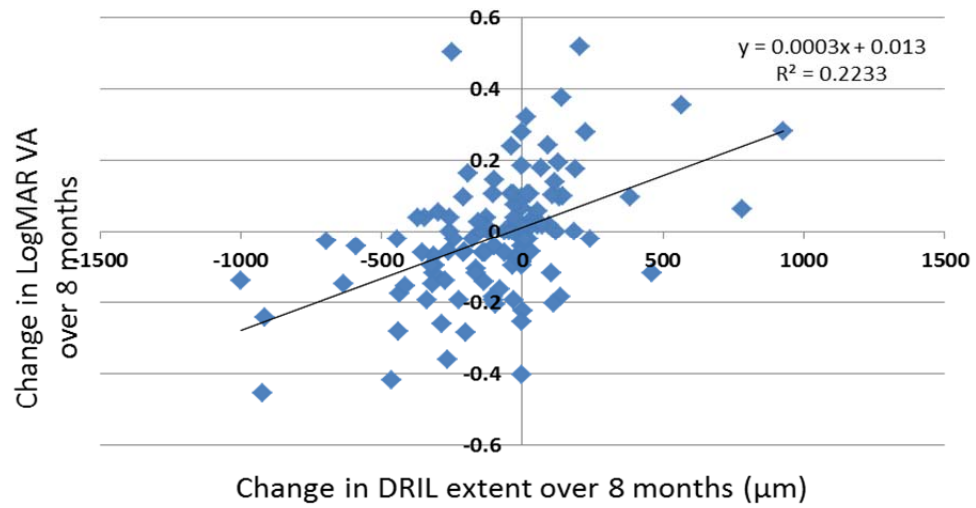
*p < 0.05. SD = standard deviation. LogMAR = logarithm of the minimum angle of resolution. VA = visual acuity. DRIL = disorganization of retinal inner layers. ELM = external limiting membrane. COST = cone outer segment tips. EZ = ellipsoid zone.

eFigure 1

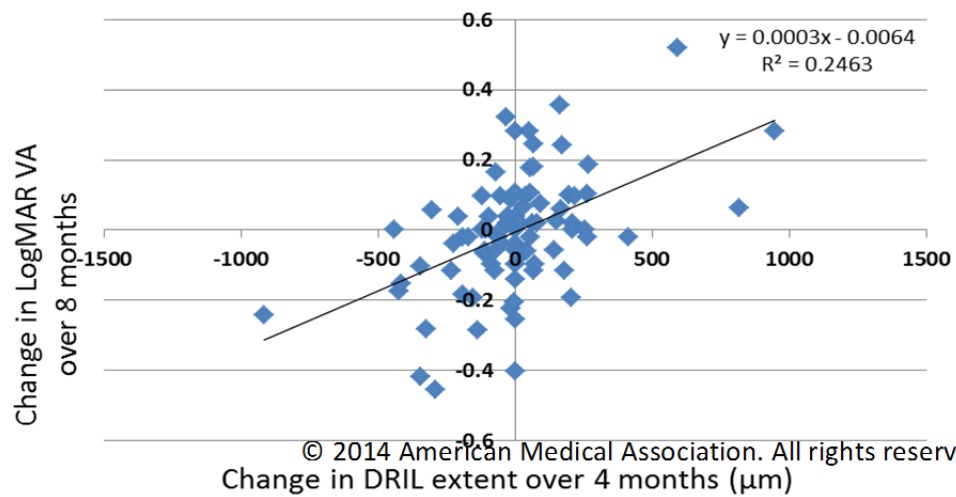
A



B

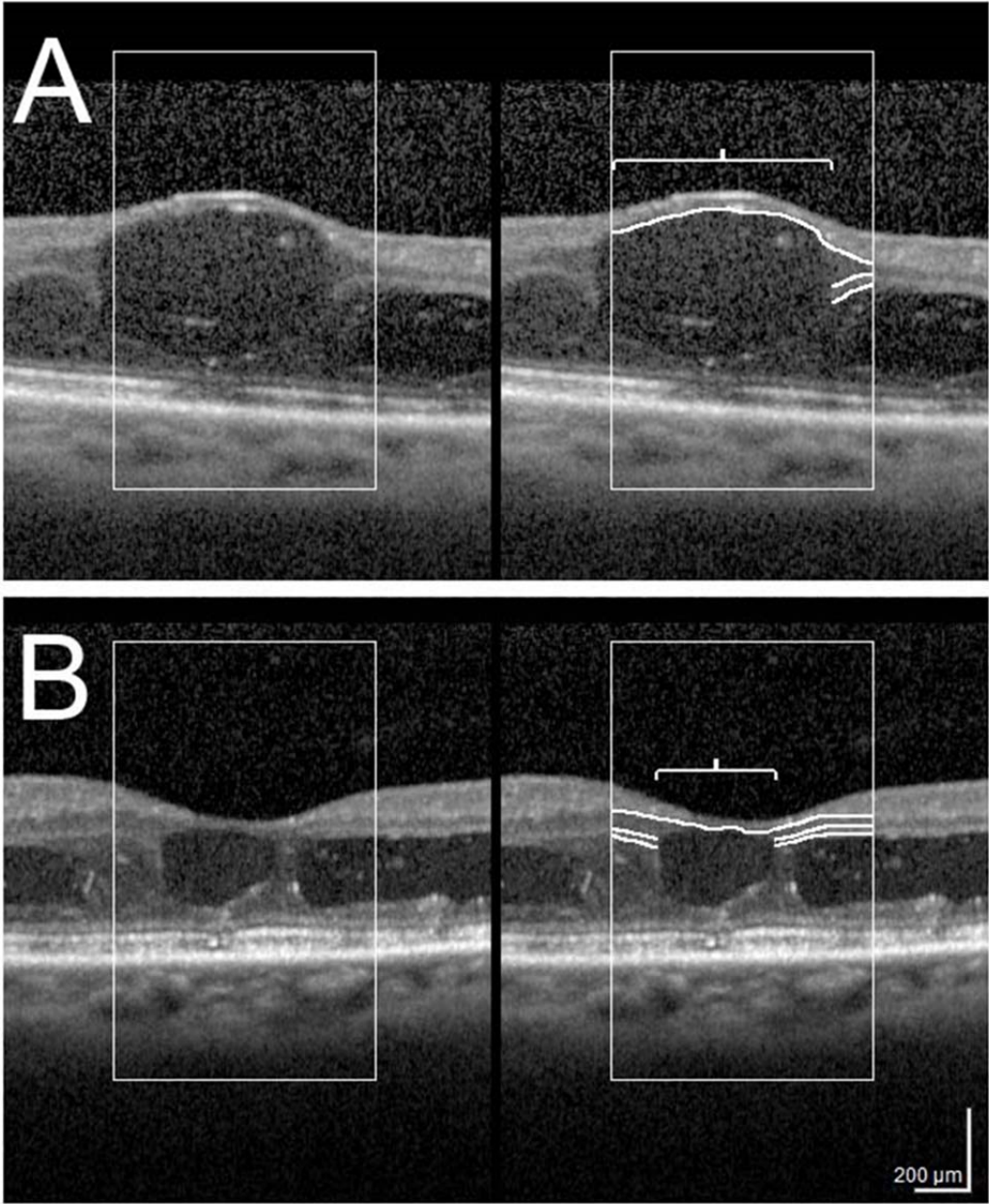


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eFigure 2



eFigure 3

