Supplementary Online Content

Seddon JM, Reynolds R, Yu Y, Rosner B. Validation of a prediction algorithm for progression to advanced macular degeneration subtypes. *JAMA Ophthalmol*. Published online February 14, 2013. doi:10.1001/jamaophthalmol.2013.2578.

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

eTable 1: Multivariate Association Between Demographic, Environmental, Macular, and Genetic Variables and Progression to Geographic Atrophy

	Derivation Sample		Validation Sample	
	HR (95% CI)	**P-value**	**HR (95% CI)**	**P-value**
Progressors/Non-Progressors	355/2559		144/835	
Age(y)				
<65	1.0		1.0	
65-74	1.3 (1.0 - 1.8)	0.060	1.1 (0.6-2.1)	0.688
75+	2.0 (1.4 - 2.9)	<0.0001	2.8 (1.5-5.1)	0.001
Sex				
Female	1.0		1.0	
Male	1.2 (1.0-1.5)	0.088	1.3 (0.9-1.9)	0.126
Education				
≤ High School	1.0		1.0	
> High School	0.9 (0.7-1.0)	0.202	0.8 (0.6-1.2)	0.338
Smoking				
Never	1.0		1.0	
Past	1.0 (0.8-1.3)	0.968	0.8 (0.5-1.0)	0.127
Current	1.3 (0.9-2.0)	0.203	2.0 (1.1-3.6)	0.021
BMI				
<25	1.0		1.0	
25-29	1.1 (0.8-1.4)	0.505	1.1 (0.7-1.6)	0.788
30+	1.3 (1.0-1.7)	0.051	1.3 (0.8-2.0)	0.302
***ARMS2/HTRA1*:rs10490924 (A69S)**				
GG	1.0		1.0	
GT	1.6 (1.3-2.1)	<0.0001	1.3 (0.9-1.9)	0.120
TT	2.4 (1.8-3.3)	<0.0001	1.9 (1.1-3.1)	0.015
***CFH*:rs1061170 (Y402H)**				
TT	1.0		1.0	
CT	1.0 (0.7-1.3)	0.782	0.9 (0.5-1.6)	0.673
CC	1.3 (0.8-1.9)	0.255	0.9 (0.5-1.7)	0.664
***CFH*:rs1410996**				
TT	1.0		1.0	
CT	2.3 (1.3 - 4.3)	0.007	0.9 (0.4-2.1)	0.858
CC	3.0 (1.6 - 5.7)	0.001	1.8 (0.7-4.3)	0.217
***C2*:rs9332739(E318D)**				
GG	1.0		1.0	
CG/CC	0.4 (0.2-0.8)	0.008	1.0 (0.5-1.8)	0.910

	Derivation Sample		Validation Sample	
	HR (95% CI)	**P-value**	**HR (95% CI)**	**P-value**
***CFB*:rs641153(R32Q)**				
CC	1.0		1.0	
CT/TT	0.7 (0.5-1.0)	0.042	1.2 (0.8-2.1)	0.395
***C3*:rs2230199(R102G)**				
CC	1.0		1.0	
CG	1.2 (0.9-1.5)	0.141	1.0 (0.4-1.5)	0.807
GG	1.5 (1.0-2.2)	0.039	1.1 (0.6-2.0)	0.783
Baseline Grade in each Eye[a]				
11/12/22	0.07 (0.04-0.1)	<0.0001	0.3 (0.2-0.4)	<0.0001
13/23/33	1.0		1.0	
14/24/34	3.8 (2.7-5.3)	<0.0001	2.6 (1.5-4.4)	0.0004
15/25/35	0.7 (0.5-1.0)	0.031	0.7 (0.4-1.1)	0.132

Abbreviations: HR=Hazard Ratio, CI= Confidence Interval

Models control for all variables in the table.

[a]Grades shown in both eyes based on CARMS score[14]

1,1 (no AMD, no AMD)/1,2 (no AMD, early AMD)/2,2 (early AMD, early AMD)

1,3 (no AMD, intermediate AMD)/ 2,3 (early AMD, intermediate AMD)/ 3,3 (intermediate AMD, intermediate AMD)

1,4 (no AMD, geographic atrophy)/ 2,4 (early AMD, geographic atrophy)/3,4 (intermediate AMD, geographic atrophy)

1,5 (no AMD, neovascular disease)/ 2,5 (early AMD, neovascular disease)/3,5 (intermediate AMD, neovascular disease)

eTable 2: Multivariate Association Between Demographic, Environmental, Macular, and Genetic Factors and Progression to Neovascular Disease

	Derivation Sample		Validation Sample	
	HR (95% CI)	**P-value**	**HR (95% CI)**	**P-value**
Progressors/Non-Progressors	454/2460		150/829	
Age(y)				
<65	1.0		1.0	
65-74	1.4 (1.1-1.9)	0.011	0.9 (1.0-3.6)	0.037
75+	2.0 (1.5-2.8)	<0.0001	2.6 (1.4-5.0)	0.003
Sex				
Female	1.0		1.0	
Male	0.8 (0.6-1.0)	0.019	0.7 (0.5-1.0)	0.082
Education				
≤ High School	1.0		1.0	
> High School	0.9 (0.7-1.1)	0.203	0.8 (0.6-1.1)	0.157
Smoking				
Never	1.0		1.0	
Past	1.5 (1.2-1.8)	0.0004	1.4 (1.0-2.0)	0.060
Current	1.9 (1.3-2.7)	0.0002	2.4 (1.3-4.5)	0.005
BMI				
<25	1.0		1.0	
25-29	1.1 (0.9-1.4)	0.257	1.3 (0.9-1.9)	0.219
30+	1.3 (1.0-1.6)	0.052	0.9 (0.6-1.5)	0.700
***ARMS2/HTRA1*:rs10490924 (A69S)**				
GG	1.0		1.0	
GT	1.5 (1.2-1.9)	<0.0001	1.5 (1.0-2.2)	0.044
TT	2.2 (1.7-2.9)	<0.0001	3.2 (2.0-4.9)	<0.0001
***CFH*:rs1061170 (Y402H)**				
TT	1.0		1.0	
CT	1.2 (0.9-1.7)	0.228	1.5 (0.8-2.6)	0.197
CC	1.3 (0.9-1.8)	0.160	1.6 (0.8-3.0)	0.190
***CFH*:rs1410996**				
TT	1.0		1.0	
CT	1.7 (1.0 - 3.0)	0.056	1.3 (0.4-4.1)	0.614
CC	2.5 (1.4 - 4.4)	0.002	2.0 (0.6-6.3)	0.256
***C2*:rs9332739(E318D)**				
GG	1.0		1.0	
CG/CC	0.7 (0.4-1.0)	0.071	0.4 (0.2-1.0)	0.043

	Derivation Sample		Validation Sample	
	HR (95% CI)	**P-value**	**HR (95% CI)**	**P-value**
***CFB*:rs641153(R32Q)**				
CC	1.0		1.0	
CT/TT	0.5 (0.3-0.7)	0.001	0.8 (0.5-1.4)	0.452
***C3*:rs2230199(R102G)**				
CC	1.0		1.0	
CG	1.3 (1.0-1.6)	0.010	1.5 (1.1-2.2)	0.015
GG	1.6 (1.1-2.3)	0.006	2.1 (1.2-3.7)	0.009
Baseline Grade in each Eye[a]				
11/12/22	0.1 (0.08-0.2)	<0.0001	0.2 (0.1-0.4)	<0.0001
13/23/33	1.0		1.0	
14/24/34	0.8 (0.4-1.5)	0.467	0.4 (0.2-1.1)	0.073
15/25/35	1.6 (1.3-1.9)	<0.0001	1.3 (0.9-1.9)	0.173

Abbreviations: HR=Hazard Ratio, CI= Confidence Interval

Models control for all variables in the table.

[a]Grades shown in both eyes based on CARMS score[14]

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1,3 (no AMD, intermediate AMD)/ 2,3 (early AMD, intermediate AMD)/ 3,3 (intermediate AMD, intermediate AMD)

1,4 (no AMD, geographic atrophy)/ 2,4 (early AMD, geographic atrophy)/3,4 (intermediate AMD, geographic atrophy)

1,5 (no AMD, neovascular disease)/ 2,5 (early AMD, neovascular disease)/3,5 (intermediate AMD, neovascular disease)