

## 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.

**eTable 1.** Multivariate Association Between Demographic, Environmental, Macular, and Genetic Variables and Progression to Geographic Atrophy for Derivation and Validation Samples

**eTable 2.** Multivariate Association Between Demographic, Environmental, Macular, and Genetic Variables and Progression to Neovascular Disease for Derivation and Validation Samples

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	P-value	Validation Sample	P-value
	HR (95% CI)		HR (95% CI)	
<b>Progressors/Non-Progressors</b>	355/2559		144/835	
<b>Age(y)</b>				
<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
<b>Sex</b>				
Female	1.0		1.0	
Male	1.2 (1.0-1.5)	0.088	1.3 (0.9-1.9)	0.126
<b>Education</b>				
≤ High School	1.0		1.0	
> High School	0.9 (0.7-1.0)	0.202	0.8 (0.6-1.2)	0.338
<b>Smoking</b>				
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
<b>BMI</b>				
<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
<b>ARMS2/HTRA1:rs10490924 (A69S)</b>				
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
<b>CFH:rs1061170 (Y402H)</b>				
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
<b>CFH:rs1410996</b>				
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
<b>C2:rs9332739(E318D)</b>				
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
<b>CFB:rs641153(R32Q)</b>				
CC	1.0		1.0	
CT/TT	0.7 (0.5-1.0)	0.042	1.2 (0.8-2.1)	0.395
<b>C3:rs2230199(R102G)</b>				
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
<b>Baseline Grade in each Eye<sup>a</sup></b>				
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.

<sup>a</sup>Grades shown in both eyes based on CARMS score<sup>14</sup>

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**

Progressors/Non-Progressors	Derivation Sample		Validation Sample	
	HR (95% CI)	P-value	HR (95% CI)	P-value
	454/2460		150/829	
<b>Age(y)</b>				
<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
<b>Sex</b>				
Female	1.0		1.0	
Male	0.8 (0.6-1.0)	0.019	0.7 (0.5-1.0)	0.082
<b>Education</b>				
≤ High School	1.0		1.0	
> High School	0.9 (0.7-1.1)	0.203	0.8 (0.6-1.1)	0.157
<b>Smoking</b>				
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
<b>BMI</b>				
<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
<b>ARMS2/HTRA1:rs10490924 (A69S)</b>				
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
<b>CFH:rs1061170 (Y402H)</b>				
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
<b>CFH:rs1410996</b>				
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
<b>C2:rs9332739(E318D)</b>				
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
<b>CFB:rs641153(R32Q)</b>				
CC	1.0		1.0	
CT/TT	0.5 (0.3-0.7)	0.001	0.8 (0.5-1.4)	0.452
<b>C3:rs2230199(R102G)</b>				
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
<b>Baseline Grade in each Eye<sup>a</sup></b>				
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.

<sup>a</sup>Grades shown in both eyes based on CARMS score<sup>14</sup>

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)