Supplementary Online Content

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

eTable 1. Association between age-related macular degeneration (AMD) and vision-specific functioning (VSF) in multiple linear regression models					
Categorical variables	VSF person measure (logits)	95 % CI		Percent Change	P value
Gender					
Male (reference)	3.89 ± 0.02	3.85	3.92		
Female	**-0.19 ± 0.03**	**-0.25**	**-0.13**	**4.86%**	**<0.001**
Ethnicity					
Chinese (reference)	4.01 ± 0.02	3.98	4.05		
Malay	**-0.31 ± 0.03**	**-0.36**	**-0.25**	**7.60%**	**<0.001**
Indian	**-0.36 ± 0.03**	**-0.42**	**-0.31**	**9.02%**	**<0.001**
Income ($SGD/month)					
<$1000 (reference)	3.734 ± 0.017	3.70	3.77		
$1000 to <$2000	**0.15 ± 0.03**	**0.09**	**0.21**	**3.99%**	**<0.001**
≥$2000	**0.10 ± 0.04**	**0.03**	**0.17**	**2.73%**	**0.004**
Education					
Primary or lower (reference)	3.72 ± 0.02	3.69	3.75		
Secondary	**0.22 ± 0.03**	**0.16**	**0.27**	**5.81%**	**<0.001**
Post-secondary	**0.16 ± 0.04**	**0.08**	**0.23**	**4.20%**	**<0.001**
Smoking status					
Never (Reference)	3.82 ± 0.01	3.79	3.85		
Current	**-0.13 ± 0.04**	**-0.21**	**-0.06**	**3.51%**	**<0.001**
Past	-0.06 ± 0.04	-0.13	0.02	1.49%	0.124
Other eye condition§ (yes)	**-0.04 ± 0.04**	-0.09	0.02		0.197
Hypertension (yes)	0.03 ± 0.03	-0.03	0.07		0.328
Diabetes (yes)	**-0.07 ± 0.03**	**-0.13**	**-0.02**		**0.009**
Cardiovascular disease* (yes)	**-0.25 ± 0.04**	**-0.32**	**-0.17**		**<0.001**
Total cholesterol (mmol/l)	-0.02 ± 0.01	-0.04	-0.00		**0.032**
AMD severity					
No AMD (reference)	3.80 ± 0.01	3.77	3.82		
Early AMD	-0.04 ± 0.05	-0.13	0.06	0.97%	0.441
Late AMD	**-0.41 ± 0.14**	**-0.69**	**-0.13**	**10.7%**	**0.004**
Continuous variables					
Presenting visual acuity (better eye, logMAR)	**-1.55 ± 0.06**	**-1.67**	**-1.42**		**<0.001**
Age, per 1 year increase	0.00 ± 0.00	-0.00	0.00		0.381
*Includes heart attack, angina, stroke § Includes glaucoma, diabetic retinopathy, cataract					

eTable 2. Sociodemographic and clinical characteristics of participants, stratified by age-related macular degeneration					
Categorical variables[a]	All participants (n= 9,962)	No AMD (n= 9312)	Early AMD (n= 590)	Late AMD (n= 60)	P Value
Gender					
Male	4909 (49.3)	4525 (48.6)	345 (58.5)	39 (65.0)	**<0.001**
Age (years)					
40-49	2464 (24.7)	2406 (25.8)	57 (9.66)	1 (1.67)	**<0.001**
50-59	3133 (31.5)	3023 (32.5)	102 (17.3)	8 (13.3)	
60-69	2543 (25.5)	2335 (25.1)	199 (33.7)	9 (15.0)	
70-80	1822 (18.3)	1548 (16.6)	232 (39.3)	42 (70.0)	
Ethnicity					
Chinese	3338 (33.5)	3072 (33.0)	241 (40.9)	25 (41.7)	**0.001**
Malays	3253 (32.7)	3071 (33.0)	161 (27.3)	21 (35.0)	
Indians	3371 (33.8)	3169 (34.0)	188 (31.9)	14 (23.3)	
Education					
Primary or lower	6017 (60.5)	5533 (59.5)	432 (73.6)	52 (86.7)	**<0.001**
Secondary	2333 (23.5)	2239 (24.1)	89 (15.2)	5 (8.33)	
Post-secondary	1595 (16.0)	1526 (16.4)	66 (11.2)	3 (5.00)	
Income ($SGD/month)					
<$1000	5383 (55.2)	4939 (54.1)	393 (68.5)	51 (86.4)	**<0.001**
$1000 to <$2000	2197 (22.5)	2092 (22.9)	101 (17.6)	4 (6.78)	
≥$2000	2180 (22.3)	2096 (23.0)	80 (13.9)	4 (6.78)	
Smoking status					
Never	6923 (69.6)	6498 (69.8)	393 (66.7)	32 (53.3)	**<0.001**
Current	1593 (16.0)	1507 (16.2)	73 (12.4)	13 (21.7)	
Past	1437 (14.4)	1299 (14.0)	123 (20.9)	15 (25.0)	
Hypertension (yes)	6119 (61.9)	5615 (60.5)	451 (76.4)	53 (88.3)	**<0.001**
Cardiovascular disease[b] (yes)	1074 (10.8)	973 (10.5)	96 (16.4)	5 (8.47)	**<0.001**
Diabetes					
Non-diabetics	7191 (75.2)	6738 (75.4)	418 (73.5)	35 (59.3)	**0.005**
Diabetics without retinopathy	1550 (16.2)	1422 (15.9)	112 (19.7)	16 (27.1)	

Diabetics with retinopathy	818 (8.56)	771 (8.63)	39 (6.85)	8 (13.6)	
Cataract (yes)	4229 (44.0)	3798 (42.3)	381 (66.3)	50 (83.3)	**<0.001**
Glaucoma (yes)	359 (3.60)	322 (3.46)	33 (5.59)	4 (6.67)	**0.011**
Continuous variables[a]					
Systolic BP (mmHg)	139.9 (21.9)	139.5 (21.8)	145.3 (21.8)	149.5 (23.0)	**<0.001**
Presenting VA - better eye (logMAR)	0.20 (0.23)	0.20 (0.23)	0.25 (0.21)	0.51 (0.44)	**<0.001**
Presenting VA - worse eye (logMAR)	0.39 (0.46)	0.38 (0.46)	0.46 (0.44)	1.22 (0.68)	**<0.001**
Total cholesterol (mmol/l)	5.42 (1.13)	5.43 (1.13)	5.22 (1.14)	5.31 (1.12)	**<0.001**
Vision-specific functioning score (logits)	3.80 (1.17)	3.69 (1.24)	3.69 (1.24)	2.92 (1.86)	**<0.001**

[a]Values are n (%) for categorical variables and mean (SD) for continuous variables
[b]Includes heart attack, angina, stroke
AMD=age-related macular degeneration; BP=Blood pressure; SGD=Singapore dollars; VA= visual acuity
There were no significant differences for diastolic BP, body mass index, HbA1c, high density lipoprotein cholesterol and triglycerides.
Bolded values indicate statistical significance.

eTable 3. Association between severity of AMD and VSF by ethnicity in multiple linear regression models using worse-seeing presenting visual acuity[a]			
AMD category	*Vision-specific functioning*	*P-value*	*% change from reference*
CHINESE			
None (ref)	4.08±0.02	P-trend <0.001	
Early AMD	-0.11 (-0.22, -0.01)	0.074	2.70%
Late AMD	**_-0.57 (-0.93, -0.22)_**	**0.002**	**14.0%**
MALAY			
None (ref)	3.63±0.02	P-trend = 0.001	
Early AMD	-0.04 (-0.24, 0.16)	0.695	1.10%
Late AMD	**-0.55 (-1.08, -0.03)**	**0.040**	**15.2%**
INDIAN			
None (ref)	3.69±0.02	P-trend = 0.116	
Early AMD	0.00 (-0.18, 0.18)	0.992	0.02%
Late AMD	0.49 (-0.12, 1.09)	0.114	13.3%

AMD=age-related macular degeneration.

[a]Adjusted for age, gender, presenting visual acuity (worse-seeing eye), education, income, smoking status, hypertension, diabetes, diabetic retinopathy, cataract, glaucoma, cardiovascular disease (heart attack, angina, stroke), total cholesterol.

Bolded values indicates significant associations (p<0.05); **Bolded** and underlined values indicate significant and clinically meaningful associations.