

## Supplementary Online Content

Tham Y-C, Liu L, Rim TH, et al. Association of cataract surgery with risk of diabetic retinopathy among Asian participants in the Singapore Epidemiology of Eye Diseases Study. *JAMA Netw Open*. 2020;3(6):e208035. doi:10.1001/jamanetworkopen.2020.8035

**eTable 1.** Baseline Characteristics of Included and Excluded Participants

**eTable 2.** Stratified Tabulation of Incident DR Cases, by Baseline Cataract Surgery Status and DR Severity

**eTable 3.** Multivariable Regression Model (Model 2 in Main Table 2) Showing the Associations Between Baseline Factors and DR Incidence

**eTable 4.** Multivariable Regression Model (Model 2 in Main Table 3) Showing the Associations Between Baseline Factors and DR Incidence

**eTable 5.** Multivariable Regression Model (Model 2 in Main Table 4) Showing the Associations Between Baseline Factors and DR Incidence

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

**eTable 1.** Baseline Characteristics of Included and Excluded Participants

	<b>Excluded (N=520)</b>	<b>Included (N=972)</b>	<b>P Value*</b>
Age, years	60.4 (10.1)	58.7 (9.1)	0.002
Gender (Male), %	241 (46.4)	495 (50.9)	0.103
Ethnicity (Malay),%	258 (49.6)	392 (40.3)	0.001
Current smoking, %	81 (15.6)	131 (13.5)	0.247
Diabetes duration, years	4.3 (7.2)	5.5 (6.8)	0.002
Anti-diabetic medication use, %	227 (43.7)	582 (59.9)	<0.001
Hypertension, %	403 (77.5)	721 (74.2)	0.175
Systolic blood pressure, mmHg	147.6 (23.7)	141.7 (19.8)	<0.001
Diastolic blood pressure, mmHg	80.1 (11.0)	78.7 (10.0)	0.023
HbA <sub>1c</sub> , %	7.5 (1.6)	7.7 (1.6)	0.025
Body mass index, kg/m <sup>2</sup>	27.5 (5.0)	27.7 (4.8)	0.503
Random blood glucose, mg/dL	160.2 (77.4)	172.8 (77.4)	0.002
Positive cataract surgery status at baseline**, %	78 (8.0)	163 (9.4)	0.247
Data presented as mean (standard deviation) or frequency (percentage), where appropriate.  *P value was estimated based on chi-square or independent t-test, where appropriate.  **Based on eye-level data.			

<b>eTable 2.</b> Stratified Tabulation of Incident DR Cases, by Baseline Cataract Surgery Status and DR Severity						
		<b>Incident DR cases stratified by DR severity level*, number of eyes (%)</b>				
<b><u>Eyes which had cataract surgery and developed DR</u></b>	<b>Number of eyes with incident DR</b>	Minimal NPDR (Level 15-20)	Mild NPDR (Level 35)	Moderate NPDR (Level 43-47)	Severe NPDR (Level 53)	PDR (>Level 60)
Positive cataract surgery status at baseline	31	17 (54.8%)	11 (35.5%)	2 (6.5%)	0 (0.0%)	1 (3.2%)
Positive cataract surgery status during 6-year follow-up	46	16 (34.8%)	14 (30.4%)	10 (21.7%)	2 (4.4%)	4 (8.7%)
<b>Overall</b>	<b>77</b>	<b>33 (42.8%)</b>	<b>25 (32.5%)</b>	<b>12 (15.6%)</b>	<b>2 (2.6%)</b>	<b>5 (6.5%)</b>
* According to the modified Airlie House classification system.						
DR =diabetic retinopathy; NPDR = non-proliferative diabetic retinopathy; PDR = proliferative diabetic retinopathy.						

**eTable 3.** Multivariable Regression Model (Model 2 in Main Table 2) Showing the Associations Between Baseline Factors and DR Incidence

<b>Baseline Factors</b>	<b>RR (95%CI)</b>	<b>P Value</b>
Age, year	0.96 (0.94-0.97)	<0.001
Gender (Male)	1.12 (0.76-1.65)	0.563
Ethnicity (Malay)	1.05 (0.78-1.43)	0.734
HbA <sub>1c</sub> , %	1.32 (1.20-1.46)	<0.001
Diabetes duration, year	1.02 (0.99-1.04)	0.288
Random blood glucose, mmol/L	1.01 (0.97-1.05)	0.484
Anti-diabetes medication use	1.40 (1.00-1.95)	0.048
Hypertension status	1.31 (0.95-1.80)	0.100
Body mass index, kg/m <sup>2</sup>	0.96 (0.92-0.99)	0.010
Current smoking	1.08 (0.68-1.71)	0.743
Baseline cataract surgery	2.07 (1.34-3.20)	0.001

RR = relative risk; CI = confidence interval; DR = diabetic retinopathy.

**eTable 4.** Multivariable Regression Model (Model 2 in Main Table 3) Showing the Associations Between Baseline Factors and Incidence of DR

<b>Baseline Factors</b>	<b>RR (95%CI)</b>	<b>P Value</b>
Age, year	0.97 (0.95-0.99)	0.001
Gender (Male)	1.08 (0.74-1.58)	0.691
Ethnicity (Malay)	1.21 (0.88-1.65)	0.238
HbA <sub>1c</sub> , %	1.40 (1.27-1.54)	<0.001
Diabetes duration, year	1.04 (1.01-1.06)	0.002
Random blood glucose, mmol/L	0.99 (0.95-1.03)	0.684
Anti-diabetes medication use	1.20 (0.87-1.65)	0.262
Hypertension status	1.11 (0.82-1.50)	0.518
Body mass index, kg/m <sup>2</sup>	0.97 (0.93-1.00)	0.033
Current smoking	1.11 (0.71-1.75)	0.636
Cataract surgery (performed during follow-up period)	1.64 (1.15-2.33)	0.006

RR = relative risk; CI = confidence interval; DR = diabetic retinopathy.

**eTable 5.** Multivariable Regression Model (Model 2 in Main Table 4) Showing the Associations Between Baseline Factors and Incidence of DR.

<b>Baseline Factors</b>	<b>RR (95%CI)</b>	<b>P Value</b>
Age, year	0.97 (0.95-0.99)	0.001
Gender (Male)	1.07 (0.74-1.54)	0.716
Ethnicity (Malay)	1.17 (0.87-1.57)	0.289
HbA <sub>1c</sub> , %	1.35 (1.23-1.48)	<0.001
Diabetes duration, year	1.02 (1.00-1.05)	0.031
Random blood glucose, mmol/L	1.00 (0.96-1.04)	0.893
Anti-diabetes medication use	1.26 (0.93-1.70)	0.135
Hypertension status	1.18 (0.88-1.58)	0.269
Body mass index, kg/m <sup>2</sup>	0.96 (0.93-0.99)	0.010
Current smoking	1.22 (0.81-1.85)	0.343
Any prior cataract surgery	1.70 (1.26-2.30)	0.001

RR = relative risk; CI = confidence interval; DR = diabetic retinopathy.