Investigative Ophthalmology

1. Ting DSW, Cheung CY, Lim G, Tan GSW, Quang ND, Gan A, Hamzah H, Garcia-Franco R, San Yeo IY, Lee SY, Wong EYM, Sabanayagam C, Baskaran M, Ibrahim F, Tan NC, Finkelstein EA, Lamoureux EL, Wong IY, Bressler NM, Sivaprasad S, Varma R, Jonas JB, He MG, Cheng CY, Cheung GCM, Aung T, Hsu W, Lee ML, Wong TY.
   Development and Validation of a Deep Learning System for Diabetic Retinopathy and Related Eye Diseases Using Retinal Images From Multiethnic Populations With Diabetes.
   JAMA. 2017 Dec 12;318(22):2211-2223.
   [https://www.ncbi.nlm.nih.gov/pubmed/29234807]

2. Chan VTT, Tso THK, Tang F, Tham C, Mok V, Chen C, Wong TY, Cheung CY.
   Using Retinal Imaging to Study Dementia.
   J Vis Exp. 2017 Nov 6;(129).
   [https://www.ncbi.nlm.nih.gov/pubmed/29155753]

3. Cheung CY, Sabanayagam C, Law AK, Kumari N, Ting DS, Tan G, Mitchell P, Cheng CY, Wong TY.
   Retinal vascular geometry and 6 year incidence and progression of diabetic retinopathy.
   Diabetologia. 2017 Sep;60(9):1770-1781.
   [https://www.ncbi.nlm.nih.gov/pubmed/28623387]

4. Chan TC, Biswas S, Yu M, Jhanji V.
   Comparison of corneal measurements in keratoconus using swept-source optical coherence tomography and combined Placido-Scheimpflug imaging.
   Acta Ophthalmol. 2017 Sep;95(6):e486-e494.
   [https://www.ncbi.nlm.nih.gov/pubmed/27805316]

5. Yip W, Ong PG, Teo BW, Cheung CY, Tai ES, Cheng CY, Lamoureux E, Wong TY, Sabanayagam C.
   Retinal Vascular Imaging Markers and Incident Chronic Kidney Disease: A Prospective Cohort Study.
   Sci Rep. 2017 Aug 24;7(1):9374.
   [https://www.ncbi.nlm.nih.gov/pubmed/28839244]

6. Loh EH, Ong YT, Venketasubramanian N, Hilal S, Thet N, Wong TY, Chen CPL, Cheung CY.
   Repeatability and Reproducibility of Retinal Neuronal and Axonal Measures on Spectral-Domain Optical Coherence Tomography in Patients with Cognitive Impairment
   Front Neurol. 2017 Aug 15;8:359.
   [https://www.ncbi.nlm.nih.gov/pubmed/28861029]

7. Benschop L, Schalekamp-Timmermans S, Roeters van Lennep JE, Jaddoe VWV, Wong TY, Cheung CY, Steegers EAP, Ikram KM.
   Gestational hypertensive disorders and retinal microvasculature: the Generation R Study
   BMC Med. 2017 Aug 14;15(1):153.
   [https://www.ncbi.nlm.nih.gov/pubmed/28803548]

8. Sharma S, Ang M, Najjar RP, Sng C, Cheung CY, Rukmini AV, Schmetterer L, Milea D.
Optical coherence tomography angiography in acute non-arteritic anterior ischaemic optic neuropathy.
Br J Ophthalmol. 2017 Aug;101(8):1045-1051.
[https://www.ncbi.nlm.nih.gov/pubmed/28057645]

9. Zheng KK, Cai J, Rong SS, Peng K, Xia H, Jin C, Lu X, Liu X, Chen H, Jhanji V.
Longitudinal Evaluation of Wound Healing after Penetrating Corneal Injury: Anterior Segment Optical Coherence Tomography Study.
Curr Eye Res. 2017 Jul;42(7):982-986.
[https://www.ncbi.nlm.nih.gov/pubmed/28632029]

10. Sabanayagam C, Yip W, Gupta P, Mohd Abdul RB, Lamoureux E, Kumari N, Cheung GC, Cheung CY, Wang JJ, Cheng CY, Wong TY.
Singapore Indian Eye Study 2: methodology and impact of migration on systemic and eye outcomes.
Clin Exp Ophthalmol. 2017 Nov;45(8):779-789.
[https://www.ncbi.nlm.nih.gov/pubmed/28472538]

11. Ng ALK, Choy BNK, Chan TCY, Wong IYH, Lai JSM, Mok MY.
Comparison of Tear Osmolarity in Rheumatoid Arthritis Patients With and Without Secondary Sjogren Syndrome
Cornea. 2017 Jul;36(7):805-809.
[https://www.ncbi.nlm.nih.gov/pubmed/28486313]

12. Huang Y, Huang W, Ng DSC, Duan A.
Risk factors for development of macular hole retinal detachment after pars plana vitrectomy for pathologic myopic foveoschisis.
Retina. 2017 Jun;37(6):1049-1054. \
[https://www.ncbi.nlm.nih.gov/pubmed/27652914]

13. Tang FY, Ng DS, Lam A, Luk F, Wong R, Chan C, Mohamed S, Fong A, Lok J, Tso T, Lai F, Brelen M, Wong TY, Tham CCC, Cheung CY.
Determinants of Quantitative Optical Coherence Tomography Angiography Metrics in Patients with Diabetes
Sci Rep. 2017 May 31;7(1):2575. [https://www.ncbi.nlm.nih.gov/pubmed/28566760]

14. Gupta P, Cheung CY.
Refining the definition of the choroidal-scleral interface.
Acta Ophthalmol. 2017 May;95(3):e243-e244.
[https://www.ncbi.nlm.nih.gov/pubmed/27229909]

15. Bakthavatsalam M, Ng DS, Lai FH, Tang FY, Brelén ME, Tsang CW, Lai TY, Cheung CY.
Choroidal structures in polypoidal choroidal vasculopathy, neovascular age-related maculopathy, and healthy eyes determined by binarization of swept source optical coherence

tomographic images.
Graefes Arch Clin Exp Ophthalmol. 2017 May;255(5):935-943.
[https://www.ncbi.nlm.nih.gov/pubmed/28150038]

16. Leung CK.
Evaluation of Retinal Nerve Fiber Layer Thinning With Fourier-Domain Optical Coherence Tomography.
JAMA Ophthalmol. 2017 Apr 1;135(4):337-338.
[https://www.ncbi.nlm.nih.gov/pubmed/28253392]

17. Ng DS, Yip YW, Bakthavatsalam M, Chen LJ, Ng TK, Lai TY, Pang CP, Brelén ME.
Elevated angiopoietin 2 in aqueous of patients with neovascular age related macular degeneration correlates with disease severity at presentation.
Sci Rep. 2017 Mar 27;7:45081.
[https://www.ncbi.nlm.nih.gov/pubmed/28345626]

18. Lin C, Mak H, Yu M, Leung CK.
Trend-Based Progression Analysis for Examination of the Topography of Rates of Retinal Nerve Fiber Layer Thinning in Glaucoma.
JAMA Ophthalmol. 2017 Mar 1;135(3):189-195.
[https://www.ncbi.nlm.nih.gov/pubmed/28152147]

19. Tang F, Cheung CY.
Quantitative Retinal Optical Coherence Tomography Angiography in Patients With Diabetes Without Diabetic Retinopathy.
Invest Ophthalmol Vis Sci. 2017 Mar 1;58(3):1766.
[https://www.ncbi.nlm.nih.gov/pubmed/28334375]

20. Wu Z, Lin C, Crowther M, Mak H, Yu M, Leung CK.
Impact of Rates of Change of Lamina Cribrosa and Optic Nerve Head Surface Depths on Visual Field Progression in Glaucoma.
Invest Ophthalmol Vis Sci. 2017 Mar 1;58(3):1825-1833.
[https://www.ncbi.nlm.nih.gov/pubmed/28353690]

21. Cheung CY, Ikram MK, Chen C, Wong TY.
Imaging retina to study dementia and stroke.
Prog Retin Eye Res. 2017 Mar;57:89-107.
[https://www.ncbi.nlm.nih.gov/pubmed/28057562]

22. Ho H, Cheung CY, Sabanayagam C, Yip W, Ikram MK, Ong PG, Mitchell P, Chow KY, Cheng CY, Tai ES, Wong TY.
Retinopathy Signs Improved Prediction and Reclassification of Cardiovascular Disease Risk in Diabetes: A prospective cohort study.
Sci Rep. 2017 Feb 2;7:41492.
[https://www.ncbi.nlm.nih.gov/pubmed/28148953]

23. Ng DS, Bakthavatsalam M, Lai FH, Cheung CY, Cheung GC, Tang FY, Tsang CW, Lai TY, Wong TY, Brelén ME.
Classification of Exudative Age-Related Macular Degeneration With Pachyvessels on En Face Swept-Source Optical Coherence Tomography.
Invest Ophthalmol Vis Sci. 2017 Feb 1;58(2):1054-1062.
[https://www.ncbi.nlm.nih.gov/pubmed/28195603]

24. Sidibé D, Sankar S, Lemaître G, Rastgoo M, Massich J, Cheung CY, Tan GS, Milea D, Lamoureux E, Wong TY, Mériaudeau F.
An anomaly detection approach for the identification of DME patients using spectral domain optical coherence tomography images.
Comput Methods Programs Biomed. 2017 Feb;139:109-117.
[https://www.ncbi.nlm.nih.gov/pubmed/28187882]

25. Chen KY, Burgner DP, Wong TY, Saw SM, Quek SC, Pang AY, Leo SW, Wong IB, Zannino D, Curtis N, Cheung M, Cheung CY, Lim TC.
Evidence of Microvascular Changes in the Retina following Kawasaki Disease.
Sci Rep. 2017 Jan 17;7:40513.
[https://www.ncbi.nlm.nih.gov/pubmed/28094311]

26. Klein R, Lee KE, Danforth L, Tsai MY, Gangnon RE, Meuer SE, Wong TY, Cheung CY, Klein BEK.
The Relationship of Retinal Vessel Geometric Characteristics to the Incidence and Progression of Diabetic Retinopathy.
Ophthalmology. 2018 Nov;125(11):1784-1792.
[https://www.ncbi.nlm.nih.gov/pubmed/29779685]

27. Szeto SKH, Wong R, Lok J, Tang F, Sun Z, Tso T, Lam TCH, Tham CC, Ng DS, Cheung CY.
Non-mydriatic ultrawide field scanning laser ophthalmoscopy compared with dilated fundal examination for assessment of diabetic retinopathy and diabetic macular oedema in Chinese individuals with diabetes mellitus.
Br J Ophthalmol. 2018 Oct 31. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/30381391]

28. Jung NY, Han JC, Ong YT, Cheung CY, Chen CP, Wong TY, Kim HJ, Kim YJ, Lee J, Lee JS, Jang YK, Kee C, Lee KH, Kim EJ, Seo SW, Na DL.
Retinal microvasculature changes in amyloid-negative subcortical vascular cognitive impairment compared to amyloid-positive Alzheimer's disease.
J Neurol Sci. 2018 Oct 31;396:94-101.
[https://www.ncbi.nlm.nih.gov/pubmed/30447606]

29. Huang H, Guan C, Ng DS, Liu X, Chen H.
Macular Pigment Optical Density Measured by a Single Wavelength Reflection Photometry with and without Mydriasis.
Curr Eye Res. 2018 Oct 30:1-5.
[https://www.ncbi.nlm.nih.gov/pubmed/30376638]

30. Heijl A, Patella VM, Chong LX, Iwase A, Leung CK, Tuulonen A, Lee GC, Callan T, Bengtsson B.
A new SITA perimetric threshold testing algorithm; construction and a multi-center clinical study.
Am J Ophthalmol. 2018 Oct 15. pii: S0002-9394(18)30592-0. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/30336129]

31. Zheng F, Wu Z, Leung CKS.
Detection of Bruch's Membrane Opening in Healthy Individuals and Glaucoma Patients with and without High Myopia.
Ophthalmology. 2018 Oct;125(10):1537-1546.
https://www.ncbi.nlm.nih.gov/pubmed/29934269]

32. Buckley BJ, Aboelela A, Minaei E, Jiang LX, Xu Z, Ali U, Fildes K, Cheung CY, Cook SM, Johnson DC, Bachovchin DA, Cook GM, Apte M, Huang M, Ranson M, Kelso MJ.
6-Substituted Hexamethylene Amiloride (HMA) Derivatives as Potent and Selective Inhibitors of the Human Urokinase Plasminogen Activator for Use in Cancer.
J Med Chem. 2018 Sep 27;61(18):8299-8320.
https://www.ncbi.nlm.nih.gov/pubmed/30130401]

33. Kumari N, Cher J, Chua E, Hamzah H, Wong TY, Cheung CY.
Association of serum lutein and zeaxanthin with quantitative measures of retinal vascular parameters.
PLoS One. 2018 Sep 27;13(9):e0203868.
[https://www.ncbi.nlm.nih.gov/pubmed/30260964]

34. Lin GM, Chen MJ, Yeh CH, Lin YY, Kuo HY, Lin MH, Chen MC, Lin SD, Gao Y, Ran A, Cheung CY.
Transforming Retinal Photographs to Entropy Images in Deep Learning to Improve Automated Detection for Diabetic Retinopathy.
J Ophthalmol. 2018 Sep 10;2018:2159702.
[https://www.ncbi.nlm.nih.gov/pubmed/30275989]

35. Cheung CMG, Shi Y, Tham YC, Sabanayagam C, Neelam K, Wang JJ, Mitchell P, Cheng CY, Wong TY, Cheung CYL.
Correlation of Color Fundus Photograph Grading with Risks of Early Age-related Macular Degeneration by using Automated OCT-derived Drusen Measurements.
Sci Rep. 2018 Aug 28;8(1):12937.
[https://www.ncbi.nlm.nih.gov/pubmed/30154521]

36. Chan VTT, Sun Z, Tang S, Chen LJ, Wong A, Tham CC, Wong TY, Chen C, Ikram MK, Whitson HE, Lad EM, Mok VCT, Cheung CY.
Spectral-Domain OCT Measurements in Alzheimer's Disease: A Systematic Review and Meta-analysis.
Ophthalmology. 2018 Aug 13. [Epub ahead of print]

[https://www.ncbi.nlm.nih.gov/pubmed/30114417]

37. Wong KH, Tham YC, Nguyen DQ, Dai W, Tan NYQ, Mathijia S, Neelam K, Cheung CY, Sabanayagam C, Schmetterer L, Wong TY, Cheng CY.
Racial differences and determinants of macular thickness profiles in multiethnic Asian population: the Singapore Epidemiology of Eye Diseases Study.
Br J Ophthalmol. 2018 Aug 10. pii: bjophthalmol-2018-312447. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/30097432]

38. Wan KH, Lam AKN, Leung CK.
Optical Coherence Tomography Angiography Compared With Optical Coherence Tomography Macular Measurements for Detection of Glaucoma.
JAMA Ophthalmol. 2018 Aug 1;136(8):866-874
[https://www.ncbi.nlm.nih.gov/pubmed/29852029]

39. Chen KYH, Li LJ, Wong TY, Cheung CY, Curtis N, Cheung M, Burgner DP.
Macro- and Microvascular Parameters After Toxic Shock Syndrome.
Pediatr Infect Dis J. 2018 Aug;37(8):e228-e230.
[https://www.ncbi.nlm.nih.gov/pubmed/29112091]

40. Cheung CY, Li J, Yuan N, Lau GYL, Chan AYF, Lam A, Tang FY, Tham CC, Pang CP, Chen LJ, Yam JC.
Quantitative retinal microvasculature in children using swept-source optical coherence tomography: the Hong Kong Children Eye Study.
Br J Ophthalmol. 2018 Jun 28. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/29954785]

41. Koh V, Tham YC, Cheung CY, Mani B, Wong TY, Aung T, Cheng CY.
Diagnostic accuracy of macular ganglion cell-inner plexiform layer thickness for glaucoma detection in a population-based study: Comparison with optic nerve head imaging parameters.
PLoS One. 2018 Jun 26;13(6):e0199134.
[https://www.ncbi.nlm.nih.gov/pubmed/29944673]

42. Tang F, Sun Z, Wong R, Lok J, Lam A, Tham CC, Chan CK, Mohamed S, Lam TC, Szeto SK, Ng DS, Cheung CY.
Relationship of intercapillary area with visual acuity in diabetes mellitus: an optical coherence tomography angiography study.
Br J Ophthalmol. 2018 Jun 4. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/29858183]

43. Chan PP, Chiu V, Wong MO.
Variability of vertical cup to disc ratio measurement and the effects of glaucoma 5-year risk estimation in untreated ocular hypertensive eyes.
Br J Ophthalmol. 2018 Jun 1. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/29858183]

44. Cheung CY, Wong TY.
Editorial to 'Triple Vessel Coronary Artery Disease and Retinal Nerve Fibre Layer Thickness'.
Ann Acad Med Singapore. 2018 Jun;47(6):206-207.
[https://www.ncbi.nlm.nih.gov/pubmed/30019064]

45. Cheung CY, Tang F, Ng DS, Wong R, Lok J, Sun Z, Tso T, Lam A, Brelén M, Chong KK, Luk AO, Chan JC, Wong TY, Tham CC.
The Relationship of Quantitative Retinal Capillary Network to Kidney Function in Type 2 Diabetes
Am J Kidney Dis. 2018 Jun;71(6):916-918.
[https://www.ncbi.nlm.nih.gov/pubmed/29501263]

46. Hou HW, Lin C, Leung CK.
Integrating Macular Ganglion Cell Inner Plexiform Layer and Parapapillary Retinal Nerve Fiber Layer Measurements to Detect Glaucoma Progression.
Ophthalmology. 2018 Jun;125(6):822-831.
[https://www.ncbi.nlm.nih.gov/pubmed/29433852]

47. Mak CY, Sin HP, Ho M, Chan VC, Young AL, Brelen ME.
Bilateral acute retinal necrosis after bilateral cataract surgery in an immunocompromised patient: a case report.
Int Ophthalmol. 2018 Jun;38(3):1329-1332.
[https://www.ncbi.nlm.nih.gov/pubmed/28536762]

48. Fang D, Tang FY, Huang H, Cheung CY, Chen H.
Repeatability, interocular correlation and agreement of quantitative swept-source optical coherence tomography angiography macular metrics in healthy subjects.
Br J Ophthalmol. 2018 May 29. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/29844088]

49. Wong ES, Lam CPS, Lau FHS, Lau WWY, Yam JCS.
Botulinum toxin as an initial therapy for management of sixth nerve palsies caused by nasopharyngeal carcinomas.
Eye (Lond). 2018 Apr;32(4):768-774.
[https://www.ncbi.nlm.nih.gov/pubmed/29386618]

50. Chan TCY, Wan KH, Shih KC, Jhanji V.
Advances in dry eye imaging: the present and beyond.
Br J Ophthalmol. 2018 Mar;102(3):295-301.
[https://www.ncbi.nlm.nih.gov/pubmed/28982950]

51. Hou HW, Lin C, Leung CK.
Integrating Macular Ganglion Cell Inner Plexiform Layer and Parapapillary Retinal Nerve Fiber Layer Measurements to Detect Glaucoma Progression.

Ophthalmology. 2018 Jun;125(6):822-831.
[https://www.ncbi.nlm.nih.gov/pubmed/29433852]

52. Tan NYQ, Tham YC, Koh V, Nguyen DQ, Cheung CY, Aung T, Wong TY, Cheng CY.
The Effect of Testing Reliability on Visual Field Sensitivity in Normal Eyes: The Singapore Chinese Eye Study.
Ophthalmology. 2018 Jan;125(1):15-21.
[https://www.ncbi.nlm.nih.gov/pubmed/28863943]

53. Cheung CY, Chan VTT, Mok VC, Chen C, Wong TY.
Potential retinal biomarkers for dementia: what is new?
Curr Opin Neurol. 2019 Feb;32(1):82-91.
[https://www.ncbi.nlm.nih.gov/pubmed/30566412]

54. Ho H, Tham YC, Chee ML, Shi Y, Tan NYQ, Wong KH, Majithia S, Cheung CY, Aung T, Wong TY, Cheng CY. Retinal Nerve Fiber Layer Thickness in a Multiethnic Normal Asian Population: The Singapore Epidemiology of Eye Diseases Study.
Ophthalmology. 2018 Dec 4. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/30529130]

55. Viljanen A, Soinio M, Cheung CY, Hannukainen JC, Karlsson HK, Wong TY, Hughes AD, Salminen P, Nuutila P, Vesti E, Tapp RJ.
Effects of bariatric surgery on retinal microvascular architecture in obese patients.
Int J Obes (Lond). 2018 Dec 5. [Epub ahead of print]
[https://www.ncbi.nlm.nih.gov/pubmed/30518825]