

Determinants of the onset and progression of diabetic retinopathy in south China: Guangzhou Diabetic Eye Study

| | | |
|--|---|---|
| Submission date 20/03/2020 | Recruitment status No longer recruiting | <input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol |
| Registration date 13/04/2020 | Overall study status Completed | <input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results |
| Last Edited 02/07/2025 | Condition category Eye Diseases | <input type="checkbox"/> Individual participant data |

Plain English summary of protocol

Background and study aims

Diabetic retinopathy is a diabetes complication that affects the eyes. The incidence and risk factors for diabetic retinopathy in southern China remain unclear. This study aims to explore the onset and progression of diabetic retinopathy and its determinants in South China.

Who can participate?

Type 2 diabetic patients registered in community health centres in Yuexiu district in Guangzhou, China

What does the study involve?

Comprehensive eye tests are performed annually for 5 years, as well as blood and urine tests.

What are the possible benefits and risks of participating?

Participants receive an annual comprehensive eye test and one-on-one ophthalmologist consultation based on the exam results. All the exams follow the normal clinical operation.

Where is the study run from?

Zhongshan Ophthalmic Center, Sun Yat-sen University (China)

When is the study starting and how long is it expected to run for?

November 2017 to October 2025

Who is funding the study?

National Natural Science Foundation of China

Who is the main contact?

Prof. Wenyong Huang
hweny@mail.sysu.edu.cn

Contact information

Type(s)

Scientific

Contact name

Dr Wei Wang

Contact details

No. 54. Xianlie Nan Road
Yuexiu District
Guanghzou
China
510000
+86 (0)20 87334687
wangwei@gzzoc.com

Type(s)

Scientific

Contact name

Ms Yuting Li

Contact details

No. 54. Xianlie Nan Road
Yuexiu District
Guangzhou
China
510000
+86 (0)20 87334687
liyuting@gzzoc.com

Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

NOPE-2019-0244.R1

Study information

Scientific Title

Guangzhou Diabetic Eye Study (GDES): exploring the onset and progression of diabetic retinopathy and the determinants in south China: a prospective cohort study

Acronym

GDES

Study objectives

This project aims to explore the onset and progression of diabetic retinopathy (DR) and their determinants through a prospective cohort in South China.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 25/10/2017, Zhongshan Ophthalmic Center Ethics Committee, Sun Yat-sen University (No.7 Jinsui Road, Zhujiang New Town, Guangzhou, China; +86 (0)20 87332529; zocethics@163.com), ref: 2017KYPJ094

Study design

Community-based prospective cohort study

Primary study design

Observational

Study type(s)

Screening

Health condition(s) or problem(s) studied

Diabetic retinopathy screening among people with diabetes

Interventions

The GDES is an ongoing community-based prospective cohort study that includes type 2 diabetic patients registered in the community health centres in Yuexiu district in Guangzhou. This district is one of the oldest and central areas of Guangzhou, the population is stable. The Zhongshan ophthalmic centre (ZOC), which is affiliated with Sun Yat-sen University in Guangzhou, is located in this district and is the main provider of eye health services for the city. The communities are stable and the community health centres have established long-term collaboration with ZOC and are fully equipped with a well-established registry system for diabetic patients. The participants were originally recruited in November 2017, and the plan was to follow up on them annually for 5 years. All ocular examinations were performed at ZOC. The examinations are as follows:

1. Visual acuity and refraction tests performed by qualified optometrists
2. Ocular biometric measurements
3. Intraocular pressure (IOP) measurement
4. Pupil dilation
5. Refraction
6. Slit lamp and fundus examinations
7. Colour retinal photographs
8. Optical coherence tomography (OCT)
9. Questionnaire interview
10. Biological sample collection

Intervention Type

Other

Primary outcome(s)

Prevalence, incidence and progression rates of DR, measured using grading of OCT results annually for 5 years

Key secondary outcome(s)

There are no secondary outcome measures

Completion date

31/10/2025

Eligibility

Key inclusion criteria

1. Aged 35–85 years
2. Diagnosed type 2 diabetes confirmed by medical records from endocrinologists, insulin treatments, oral medicine, fasting blood glucose ≥ 7.0 mmol/L for at least two consecutive measurements or postprandial blood glucose ≥ 11.1 mmol/L
3. Ocular-treatment-naïve eyes

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

35 years

Upper age limit

85 years

Sex

All

Key exclusion criteria

1. Any severe systemic disease, such as ischemic heart disease, stroke, cancer and kidney disease, or a history of systemic surgery, such as cardiac bypass, thrombolysis and kidney transplantation
2. Any cognitive disorder, mental disorder or failure to finish the questionnaire and all the examinations
3. Combined glaucoma, age-related macular degeneration, glaucoma, vitreous macular disease (vitreous haemorrhage, retinal detachment), amblyopia and other eye diseases
4. A history of intraocular surgery, such as retinal laser, intraocular anti-VEGF injection, glaucoma surgery, cataract surgery, laser myopia surgery and vitreoretinal surgery history
5. A failure of mydriasis due to corneal ulcer, severe refractive media turbidity or shallow anterior chamber and angle closure glaucoma

Date of first enrolment

01/11/2017

Date of final enrolment

31/10/2022

Locations

Countries of recruitment

China

Study participating centre

Zhongshan Ophthalmic Center

Sun Yat-sen University

No. 54 Xianlie Nan Road

Yuexiu District

Guangzhou

China

510000

Sponsor information

Organisation

Sun Yat-sen University

ROR

<https://ror.org/0064kty71>

Funder(s)

Funder type

University/education

Funder Name

Sun Yat-sen University

Alternative Name(s)

National Guangdong University, , , SYSU

Funding Body Type

Government organisation

Funding Body Subtype

Universities (academic only)

Location
China

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available upon request from Prof. Wenyong Huang (hweny@mail.sysu.edu.cn). Informed consent will be obtained before the participant join the study. The study will follow the legal restrictions of the Ethics Committee of Zhongshan Ophthalmic Center, Sun Yat-sen University. For access to the data, please contact the principal investigator after the study completes.

IPD sharing plan summary

Available on request

Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|-------------------------------|--------------|------------|----------------|-----------------|
| Results article | Participant information sheet | 26/05/2025 | 27/05/2025 | Yes | No |
| Results article | | 01/07/2025 | 02/07/2025 | Yes | No |
| Participant information sheet | | 11/11/2025 | 11/11/2025 | No | Yes |