

## **Assessment of ocular surface curvature measurement: Comparison between OCT measurement and Purkinje image measurement**

**QUT Ethics Approval Number 4754**

### **Research team**

Principal Researcher:	Mr Asik Pradhan	PhD student
Associate Researcher(s):	Miss Anna Do	MOptom student
	Miss Janvi Sandhu	MOptom student
	Miss Ngoc Minh Anh Thai	MOptom student
	Miss Janelle Choong	MOptom student
	Miss Emily Cai	MOptom student
	Miss Erika Baulch	MOptom student
	Dr Andrew Carkeet	Senior Lecturer
	Dr Emily Pieterse	Lecturer
	Prof David Atchison	Professor
	Dr Rohan Hughes	Research Fellow
<b>School of Optometry and Vision Science, Faculty of Health, Queensland University of Technology (QUT)</b>		

### **Why is the study being conducted?**

This research project is being undertaken as part of PhD study for Asik Pradhan. The purpose of this project is to calculate and compare the shape of the eye surfaces using Optical Coherence Tomography (OCT) and Purkinje images. This technique to extract information from the images will be useful for future experiments and projects.

You are invited to participate in this research project because you meet the selection criteria for this study.

### **What does participation involve?**

Your participation will involve a single visit that will approximately take 1.5 hours of your time.

We will conduct a screening examination to determine your eligibility for this study prior to the measurement session that includes a set of standard clinical tests. We need the help of participants with normal visual acuity, normal eye pressure, normal eye and good general health and no history of reactions to eye drops, and the screening will assess these factors.

Once your eligibility is confirmed, a single drop of cyclopentolate (1%) eyedrops will then be instilled in each eye to enlarge your pupils temporarily for up to 24 hours. It is a safe drug commonly used in routine eye examinations with extremely rare side effects. It will take approximately 40 minutes for the eye drop to take effect. The researcher will then take images of your eye using OCT instrument and Purkinje image camera. The imaging procedures will be repeated after 10 minutes.

Your participation in this research project is entirely voluntary. If you agree to participate, you can

withdraw from the research project without comment or penalty. You can withdraw anytime during the study. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT.

### **What are the possible benefits for me if I take part?**

It is expected that this research project will not benefit you directly. The outcomes of the research, however, will help researchers to determine the shape of ocular surfaces using customized tools which will be useful for future research projects. This may help to improve our understanding of how the eye works optically. The investigators will provide you feedback about the outcomes of the study upon request. A gift voucher for \$20 will be provided to you on completion to compensate you for your time. An additional voucher of \$20 will be provided if you wish to use an individual taxi ride if you cannot bring someone to drive you home or take public transport on your own.

### **What are the possible risks for me if I take part?**

The standard procedures involved in the screening and test measurements are safe for participants. However, the use of Cyclopentolate eye drops will cause a period of blurry near vision (inability to focus reading prints in particular) together with temporary pupil dilation (enlarged pupil size), increased sensitivity to bright lights and reduced depth perception. These side effects may last up to 24 hours. You may also experience stinging sensation following eye drop instillation transiently. Though extremely rare but possible event that a participant reacts adversely to pupil dilation procedure like increased eye pressure, therapeutically qualified optometrists from the research team will be on hand to provide treatment. We will conduct screening tests beforehand to determine if you are likely to react adversely to these eye drops.

We recommend you wear sunglasses after the session. We also advise you to bring someone along to drive you home or take public transport alternatively after the eye test.

There is also a possible risk of infectious diseases like COVID-19 transmission through direct physical contact between the individuals, surfaces, instrument, and disposable consumables. To minimize the risks, we will use non-invasive instrument for measurements after disinfection (using 70% isopropyl alcohol) prior to and following its use. Social distancing will be maintained whenever practical, and where not possible, a surgical mask will be used by both investigator and participant.

### **What about privacy and confidentiality?**

All comments and responses are anonymous. Your individual information will be safeguarded using appropriate measures and unauthorised access will be prevented. The data gathered from the test measurements will be coded for re-identification that will only be accessible to the research team. Individual identifiable data will not be disclosed in any publications or reports arising from this research.

Please note that non-identifiable data from this project may be used for future projects or shared with other researchers. The potentially re-identifiable data may be used by the research team for future works. Any data collected as part of this research project will be stored securely as per QUT's Management of research data policy. Data will be stored for a minimum of 5 years and can be disclosed if it is to protect you or others from harm, if specifically required by law, or if a regulatory or monitoring body such as the ethics committee requests it.

**How do I give my consent to participate?**

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

**What if I have questions about the research project?**

If you have any questions or require further information, please contact one of the listed researchers:

Mr Asik Pradhan	0731385713	asik.pradhan@hdr.qut.edu.au
Dr Andrew Carkeet	0731385703	a.carkeet@qut.edu.au

**What if I have a concern or complaint regarding the conduct of the research project?**

QUT is committed to research integrity and the ethical conduct of research projects. If you wish to discuss the study with someone not directly involved, particularly in relation to matters concerning policies, information or complaints about the conduct of the study or your rights as a participant, you may contact the QUT Research Ethics Advisory Team on 07 3138 5123 or email [humanethics@qut.edu.au](mailto:humanethics@qut.edu.au).

**Thank you for helping with this research project. Please keep this sheet for your information.**