

## MOptom PROJECTS

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### WHAT IS THE ROLE OF THE PERIPHERAL RETINA IN CENTRAL RETINA DISEASES?

Retinal diseases which involve the central retina such as age-related macular degeneration and glaucoma have devastating effects on patient's vision. However, there is evidence that many of these diseases extend beyond the macular and affect the peripheral retina as well. This project investigates the role of the peripheral retina in central retina diseases and the clinical significance of these changes. This project will involve analysing clinical images of the retina taken with advanced imaging modalities such as Optomap of patients seen at the Centre for Eye Health. From this we will characterise peripheral findings in central retina diseases and the effect of incidental findings.

### HOW DO DRUSEN AFFECT THE RETINA THROUGHOUT AMD?

Age related macular degeneration (AMD) is a leading cause of blindness worldwide. Detection and diagnosis of AMD relies on imaging of early structural abnormalities known as drusen. Our group recently found that drusen alters the thickness of the retina directly above and in surrounding drusen-free areas. We have also found different drusen types have effects on different retinal layers.

This project expands on these findings, determining how these drusen related changes link to disease pathogenesis. This project uses clinical images from AMD patients to measure changes relating to drusen using automated segmentation software and image analysis tools.

