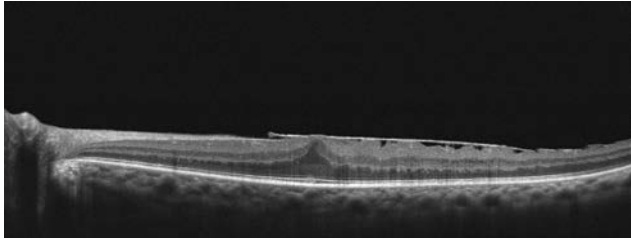
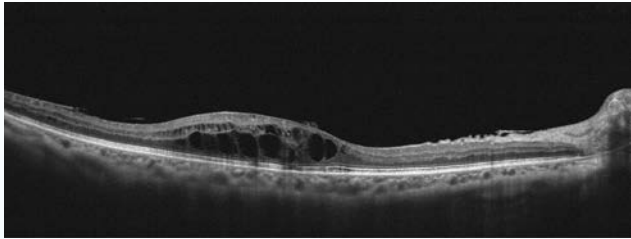


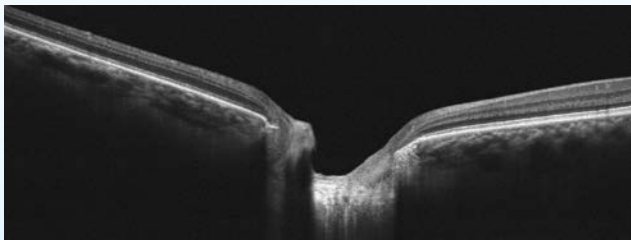
Age-related macular degeneration



Epiretinal membrane



Macular edema



Large disc cup in glaucoma patient

## HKSH Ophthalmology Centre

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Closed on Sundays and Public Holidays  
Consultation by Appointment

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For enquiries and appointments,  
please contact us



# Optical Coherence Tomography (OCT)

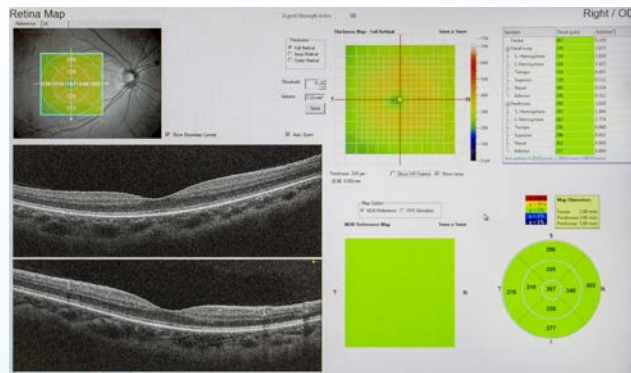


## What Is Optical Coherence Tomography (OCT)?

A low energy, pin-point near-infrared laser beam is projected and scanned across designated structures of the eyeball, including the cornea, anterior segment, and the back of the eye (retina). An advanced computerised algorithm, known as low-coherence interferometry, analyses the reflected light and transform it into images corresponding to the structural layers of the retina and its nerve fibre layer.

### What are the Merits of OCT Scanning?

OCT scanning offers a non-invasive method for analysing the layered structures of the retina, which is the photosensitive structure of our eyes, similar to the film in a camera. The system achieves a resolution of below 5 microns, allowing for detailed examination of the macula, optic nerve, and posterior segment of the eye. An anterior segment OCT system can analyse the cornea, iris, anterior segment angles, and the anterior part of the lens.



## Clinical Applications

OCT provides information of the pathology of many complicated retinal and optic nerve diseases. It can facilitate diagnosis, assessment and progress monitoring of many eye problems before and after treatment, including:

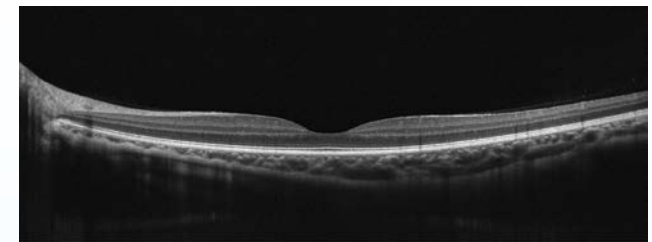
1. Macular diseases: e.g. full-thickness/lamellar macular hole, macular detachment, macular schisis, high myopic maculopathy, age-related macular degeneration, central serous chorioretinopathy, macular edema, macular pucker, epiretinal membrane, etc.
2. Retinal diseases: e.g. diabetic retinopathy and maculopathy, retinal/ macular edema secondary to retinovascular disease, etc.
3. Retinal nerve fibre layer pathology: e.g. glaucomatous retinal nerve fibre damage and thinning, etc.
4. Optic nerve pathology: e.g. disc cupping in glaucomatous optic neuropathy, optic disc pit, disc drusen, etc.
5. Assessment of ganglion cell complex thickness at the macula, which can help diagnose glaucoma earlier
6. Assessment of the anterior chamber depth and angle, and monitoring of its change (e.g. in narrow-angle or occludable-angle suspects)
7. Assessment of cornea diameter, cornea thickness, the cornea flap after corneal-refractive surgery (e.g. LASIK), and many other corneal pathologies
8. Assessment of the surface of the lens in the eye and that of intraocular lens after cataract surgery

Overall, OCT technology can thoroughly examine the structures of the eye. It is an efficient and non-invasive diagnostic method that can be performed repeatedly, helping to improve the quality of diagnosing and treating eye diseases as well as monitoring disease progression.

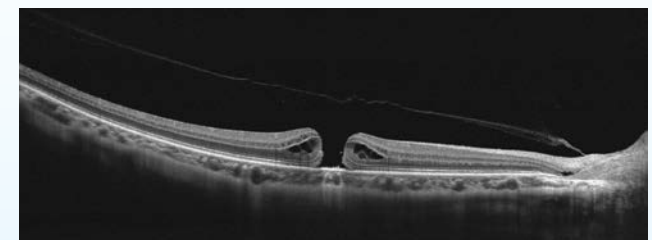
Please consult your ophthalmologists for further details to assess whether OCT can facilitate the treatment of your eye condition.



Normal fundus



Normal macula



Macular hole