

HKSH Ophthalmology Centre

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Service Hours

Monday to Friday: 9:00 am – 5:00 pm
Saturday: 9:00 am – 1:00 pm
Closed on Sundays and Public Holidays
Consultation by Appointment

Admiralty

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For enquiries and appointments,
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OCT Optical Coherence Tomography



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OPH.12.11.H/E-07-102020

養和眼科部

HKSH Department of Ophthalmology

www.hksh.com

What Is Optical Coherence Tomography?

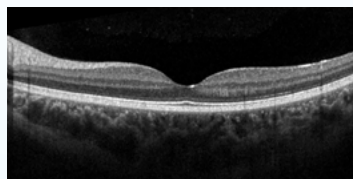
A low energy pin-point near-infrared laser beam is projected and scanned across designated structures of the eyeball including the cornea, anterior segment and the back of the eye (retina). The advanced computerised algorithm (low-coherence interferometry) will analyse the reflected light and transform them into images in accordance with structural layers of the retina and its nerve fibre layer.

What Is the Merit of OCT Scanning?

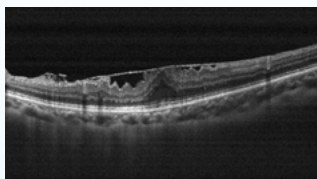
In a non-invasive manner, posterior segment OCT system can analyse the layered structures of the retina (which is the photosensitive structure of our eyes, like the film in a camera) with a resolution reaching below 5 microns. The macula, optic nerve, and the posterior segment of the eye can be examined in greater details. The anterior segment OCT system can analyse the cornea, iris, anterior segment angles and anterior part of the lens.

Clinical Applications

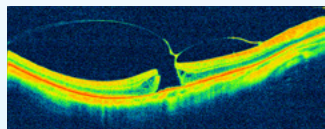
Since its inception, OCT has helped ophthalmologists tremendously in understanding the pathology of many complicated retinal and optic nerve diseases. It can facilitate diagnosis, assessment and progress monitoring of many eye problems before and after treatment, including:



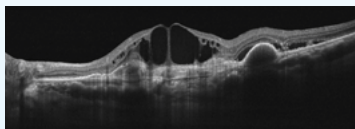
Normal macular



Epiretinal membrane



Macular hole

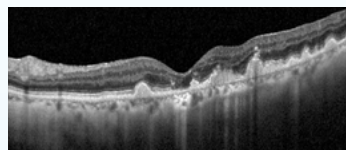


Macular edema

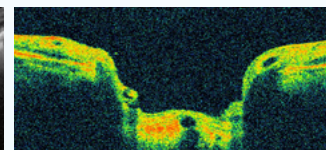
1. Macula diseases: e.g. full thickness/lamellar macular hole, macular detachment, macular schisis, high myopic maculopathy, age-related macular degeneration, central serous chorioretinopathy, macular edema, macular pucker, epiretinal membrane, etc.
2. Retinal diseases: e.g. diabetic retinopathy and 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 diagnosing glaucoma earlier
6. Assessment of the anterior chamber depth and angle, and monitoring of its change (e.g. in narrow angle or occludable angle suspect)
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 also that of intraocular lens after cataract surgery

Overall, the development of OCT has greatly enhanced the quality care and management of many eye patients in a fast, non-invasive and repeatable way.

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



Age-related macular degeneration



Large disc cup in glaucoma patient