

## 光相干性斷層造影

### 最新視網膜及視神經盆之檢查方法

#### 光相干性斷層造影是甚麼？

光相干性斷層造影是利用極低能量的「近紅外線」激光，以指定的電腦程序，高速投射在視網膜的指定範圍並進行掃描，感應器將收集由視網膜反射回的光線，然後採用先進的電腦程式分析其反射回的光線之光學特質（低「相關干涉」測量法），此特質將因應視網膜的結構層和視神經的厚薄而有所改變，從而能分析出視網膜及視神經的分層性結構。

#### 光相干性斷層造影有何優點？

這部光相干性斷層造影儀採用無侵犯性的方式，就能分析出視網膜的層次結構（視網膜是眼睛負責感光的部份，就像攝影機的底片一樣），解像度高達10微米（縱向）和20微米（橫向），效果細緻如一部超級顯微鏡。

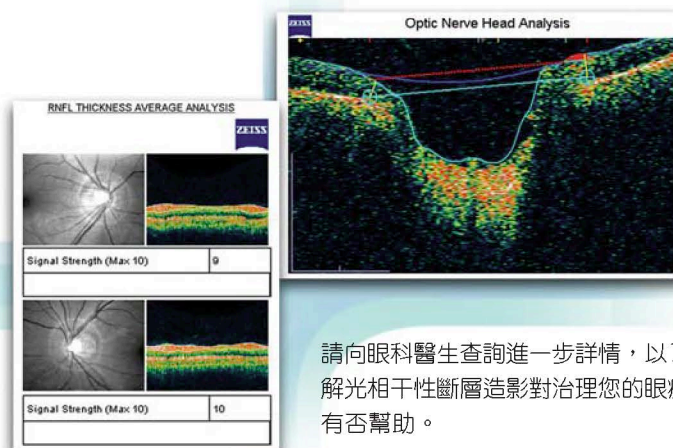
#### 臨床應用

這種光相干性斷層造影儀之應用，讓眼科醫生能夠了解及掌握許多複雜的視網膜及與視神經有關之疾病的病理，有助治療下列眼疾之診斷、評估和監察手術前後的變化進度，包括：

1. 黃斑病變：如黃斑穿孔、脫落、裂損、深度近視黃斑病變、老年性黃斑退化、中心漿液性脈絡視網膜病變、黃斑水腫、黃斑起皺等
2. 視網膜病變：糖尿病性視網膜病變及其黃斑病變、視網膜前膜病變等

3. 視神經層病變：如青光眼視神經層損壞和變薄等
4. 視神經病變：如青光眼視神經萎縮、視神經盤凹陷、視盤玻璃性疣結等

採用這種光相干性斷層造影的先進技術，令診斷更為迅速可靠及安全，並可重複進行，以跟進病情變化，大大提升治療眼疾的質素和效果。



請向眼科醫生查詢進一步詳情，以了解光相干性斷層造影對治理您的眼疾有否幫助。

#### 眼科部

查詢或預約，歡迎聯絡我們  
地址：養和醫院李樹培院八樓 / 中院五樓  
電話：2835 8880（李樹培院八樓） /  
2835 8890（中院五樓）  
傳真：2892 7510  
電郵：eye@hksh.com  
<http://www.hksh.com>

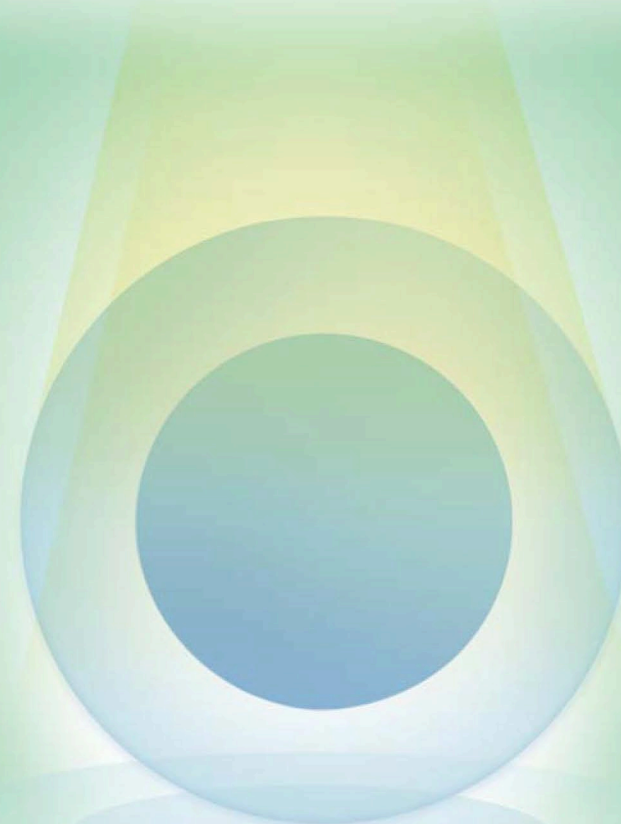
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養和醫院  
HONG KONG SANATORIUM & HOSPITAL

# O.C.T.

## 光相干性斷層造影



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Department of Ophthalmology

## OCT : Optical Coherence Tomography

*A modern tool for evaluation of the Retina and the Optic Nerve Head*

### What is OCT?

A low energy pin-point near-infrared laser beam is projected and scanned across designated area of the back of the eye (retina) in a pre-defined pattern. Sensors will then detect the reflected light. Advanced computerized algorithm will then analyze the reflected light (low-coherence interferometry) which has been changed 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, OCT can analyze the layered structures of the retina (which is the photosensitive structure of our eyes, like the film in a camera) with a resolution of 10 microns axially and 20 microns transversely, similar to a super-microscope.

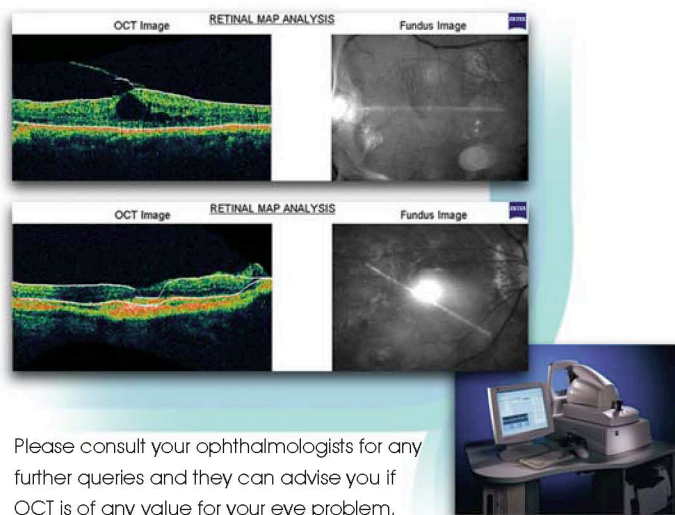
### Clinical Applications

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

1. Macular diseases : e.g. macular hole, macular detachment, maculoschisis, high myopic macular pathology, age-related macular degeneration, central serous chorioretinopathy, macular oedema, macular pucker etc.

2. Retinal problems : e.g. diabetic retinopathy and maculopathy, epiretinal membrane etc.
3. Retinal nerve fibre layer pathology : e.g. glaucomatous retinal nerve fibre damage and thinning etc.
4. Optic nerve pathology : e.g. glaucomatous optic neuropathy, optic disc pit, disc drusen etc.

Generally, the development of this new technology of OCT has greatly enhanced the quality of care and management of many eye patients in a fast, non-invasive and reproducible way.



Please consult your ophthalmologists for any further queries and they can advise you if OCT is of any value for your eye problem.

#### Department of Ophthalmology

For enquiries and appointment, please contact us at:

Add: 8/F, Li Shu Pui Block or 5/F, Central Block  
Hong Kong Sanatorium & Hospital

Tel : 2835 8880 (8/F, Li Shu Pui Block) /  
2835 8890 (5/F, Central Block)

Fax : 2892 7510

E-mail : [eye@hksh.com](mailto:eye@hksh.com)

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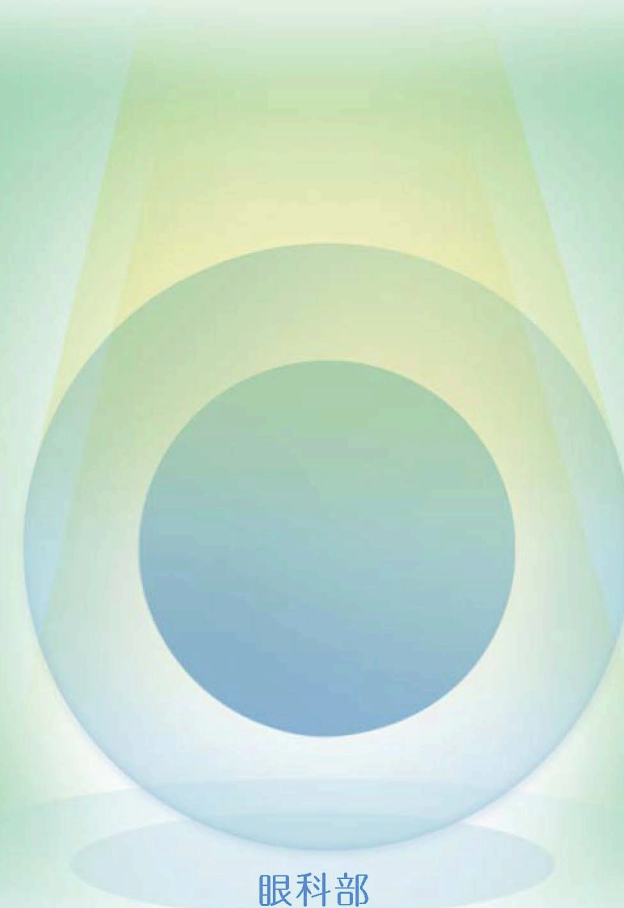
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### Optical Coherence Tomography



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