

# Global Ophthalmology and Glaucoma Conference

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## Role of OCT in glaucoma

Optical coherence tomography is fast becoming an indispensable tool for aiding not only in diagnosis of glaucoma but also in tracking its progression. It is now known that structural damage of Retinal Nerve fiber layer (RNFL) precedes the functional damage which becomes evident on testing the visual fields. Approximately 40% of axonal loss has to occur before any detectable change occurs in visual function. The recognition of RNFL loss in patients with normal visual fields has led to the concept of “Pre-perimetric” glaucoma, signifying early glaucomatous damage not evident on standard automated perimetry. It has been suggested that RNFL loss even precedes the disc changes which ultimately are reflected in field defects on perimetry. OCT is one such modality and is based on the principle of Low coherence interferometry. It is a non-invasive imaging technology which uses light to create high resolution ( $<10\ \mu$ ), cross-sectional images in an acquisition time of around 1.2 seconds. OCT scans for detecting glaucoma includes scanning three regions in retina:

- The Peripapillary Retinal Nerve Fiber Layer (RNFL)
- The Ganglion cell complex in macular region
- The optic nerve head

Combined data from above scans is then interpreted by the system and compared with the data of age matched individuals thus giving us information about the abnormal thinning of RNFL. In this workshop, we will stress on the working of machine and interpretation of OCT data by the beginners. The reading of OCT printout will be demonstrated and also common pitfalls and fallacies in the system will be highlighted.

## Biography

Sumit Sachdeva is Associate Professor working in the Regional Institute of Ophthalmology PGIMS, Rohtak, Haryana India. He has keen interest in Glaucoma Diagnosis & Management and is a faculty of Glaucoma unit in the same institute. He has contributed many chapters and articles in national and international journals and books.

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