Descriptive Interpretation of OCT

Primary reference text
Guide to Optical Coherence Tomography Interpretation

Brancato R, Lumbroso B et al;
I.N.C. Innovation-News-Communication, Roma, IT 2005

Definitions:

descriptive: words that tell or depict
interpret: to set forth the meaning of; explain; to understand in a particular way
interpretation: an explanation or analysis of a finding
qualify: characterize, name
qualitative: pertaining to or concerning qualitites
quantify: to determine or measure
quantitative: describing or measuring a quantity

A logical approach to analysis of OCT scans: the Cartesian method described by Rene Descartes, 1598 – 1650. Called the "Founder of Modern Philosophy" and the "Father of Modern Mathematics"

Cartesian Analysis: the physician's role

Qualitative and quantitative analysis + deduction and synthesis (of other findings)
= *diagnosis & treatment*

The imager's role: critical to the analysis process

- Provide the best possible images
- Facilitate good patient compliance to ease the process and assure repeatability
- Understand (interpret) what is being shown in order to make adjustments to improve the quality of the information

In any type of OCT, TD or SD, qualitative and quantitative analysis are appropriate in observing scans:

Qualitative analysis
- Morphology
- Anomalous structures
- Reflectivity of entities – hyper, or hypo and "shadowed" areas

Quantitative analysis
- Thickness
- Volume
- Area

Descriptive interpretation of fluorescein angiography is using common terms to describe the action of dye as it circulates through the posterior pole of the eye.

There is a "normal pattern" for ocular circulation:
Deviation from the norm = abnormality = pathology

Descriptive interpretation of OCT is using common terms to describe the morphology, reflectivity, thickness, volume and area of tissue being scanned

There are "normals" for ocular structures:
Deviation from the norm = abnormality = pathology

Qualitative Analysis

MORPHOLOGY

Types of Changes

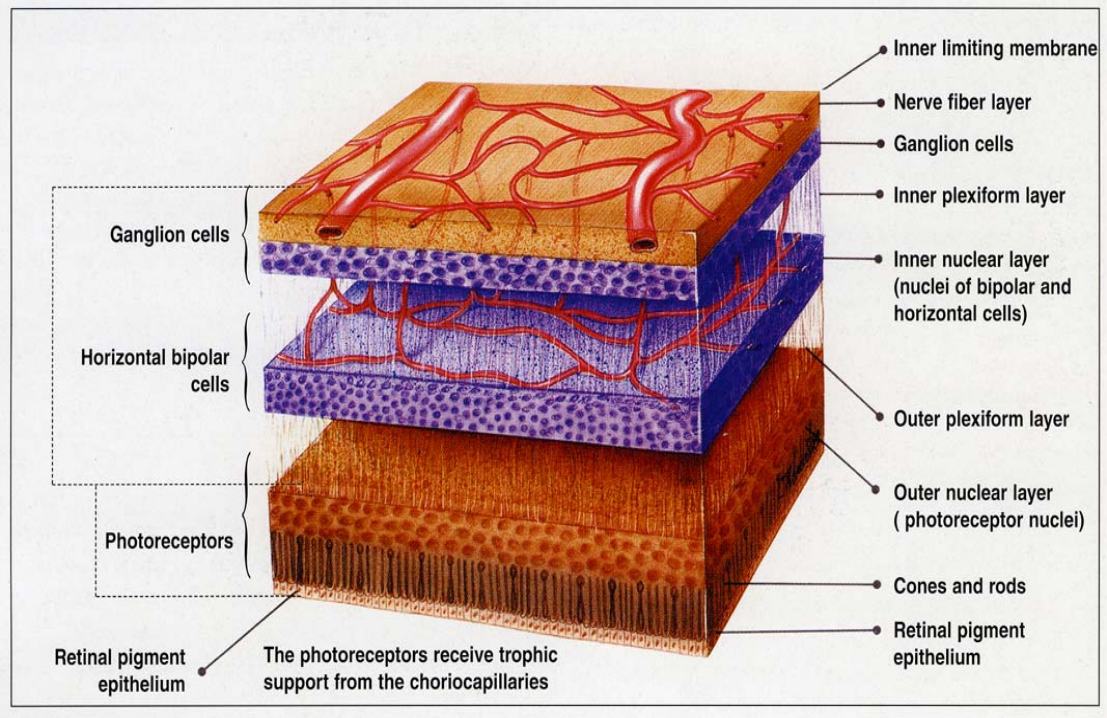
Retinal structure abnormalities changes
- Concavity with myopia
- subretinal tumors

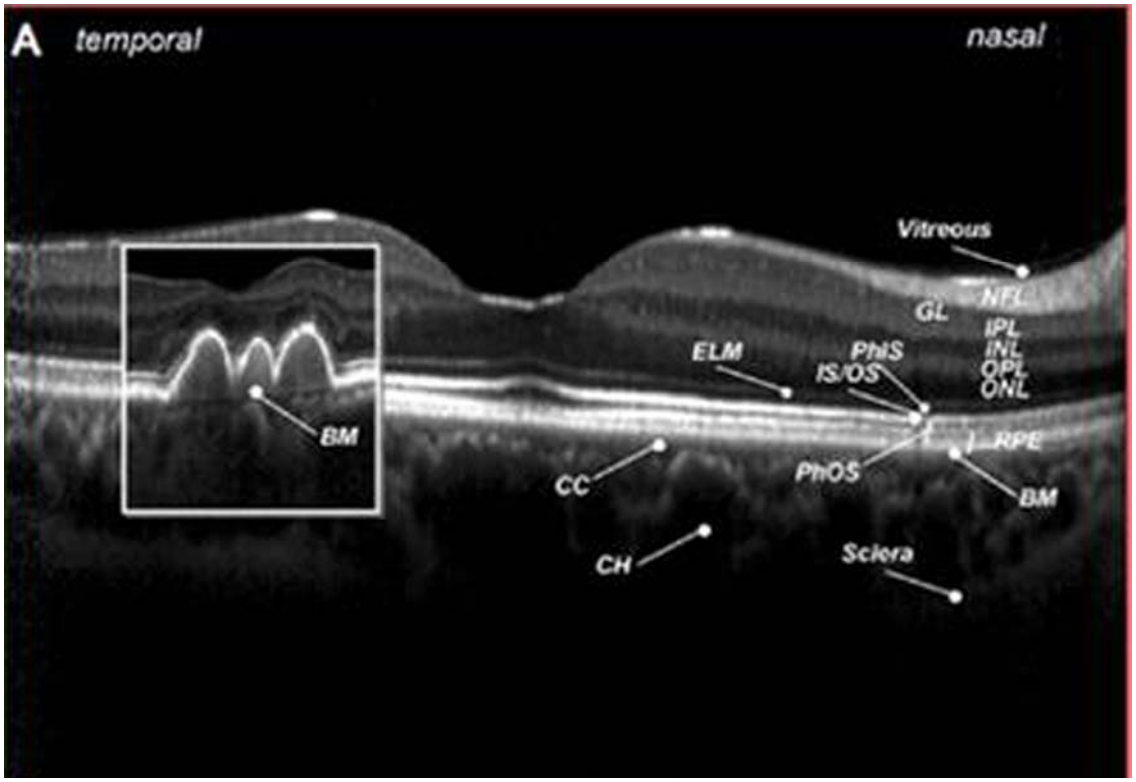
Changes in retinal profile
- loss of foveal depression
- traction and membranes
- folds
- cysts
- macular holes
- significant hemorrhage

Intraretinal structural changes
- drusen
- hemorrhage
- exudates
- neovascular membranes

Subretinal structural changes
- angioid streaks
- pigment epithelial detachments (PED)

RETINAL ANATOMY FOR DSESCRIPTIVE INTERPRETATION OF OCT
Images from “Guide to OCT Interpretation” by Rosario Brancato and Bruno Lumbroso

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