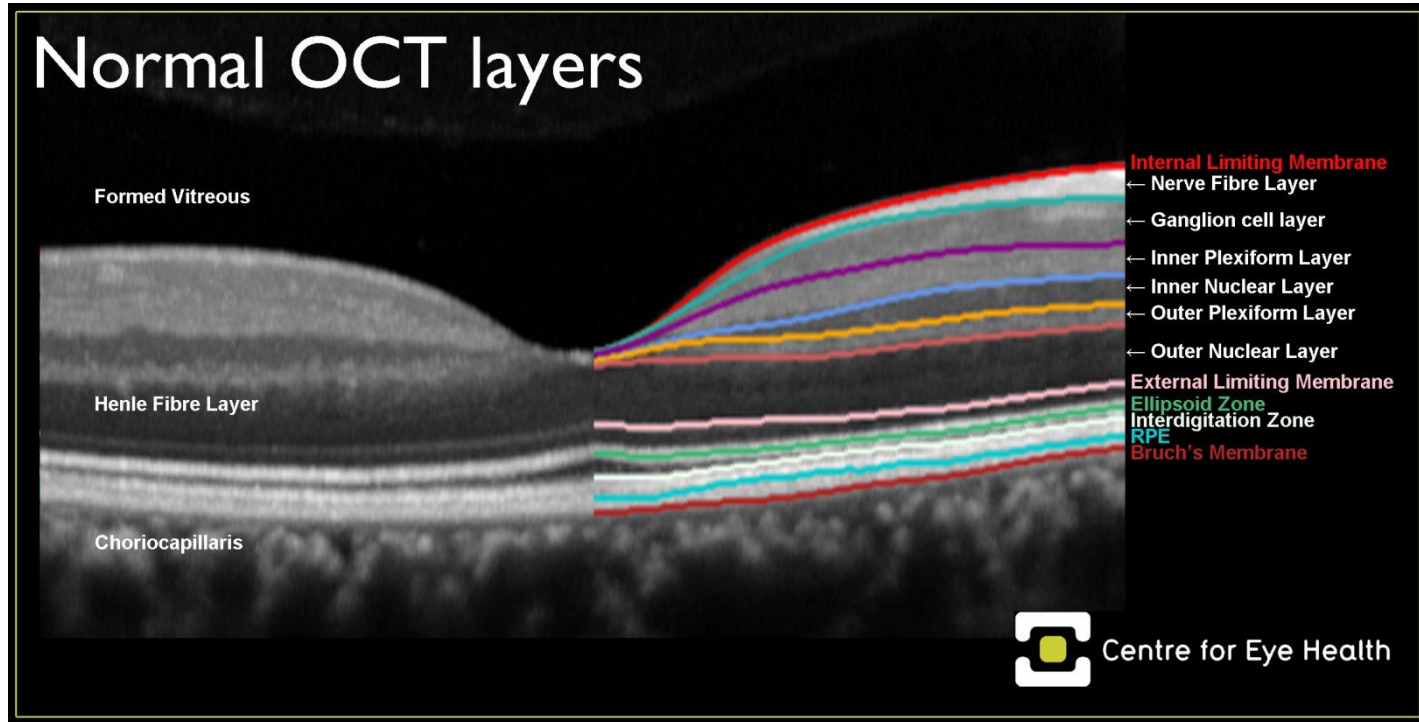


Step 1. Compare and contrast against a healthy macula using applied knowledge of ocular anatomy, in the context of other clinical findings.

Images may vary between instruments, and will depend on the:

- Scan parameters – speed, density, orientation, location, depth
- Wavelength of the light source
- Axial and lateral resolution of the instrument
- Signal roll-off
- Other features such as averaging, enhanced depth imaging or eye tracking

B-scans may be viewed in white on black (featured), black on white or pseudocolour. Grayscale enhances the visualisation of subtle pathologies such as cystic spaces.⁷



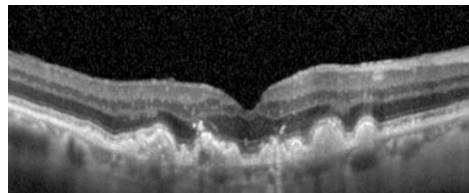
Step 2. Review each B-scan qualitatively, including the vitreous, retina, RPE, choroid and choroid sclera junction for:

Anomalous hyper- or hypo-reflective lesions:

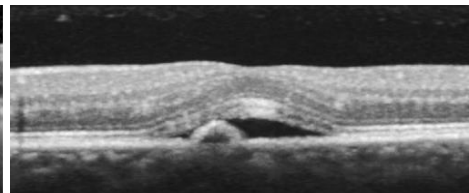
- | | |
|------------|----------------------|
| • Fluid | • Pigment |
| • Blood | • Deposits |
| • Exudate | • Neovascularisation |
| • Fibrosis | • Cavities |

Focal or diffuse morphological changes:

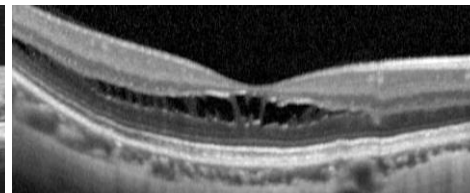
- Irregularities
- Abnormalities in thickness or shape
- Elevations or depressions
- Differences in visibility
- Attenuation or fragmentation of tissues
- Apposition or displacement of tissues



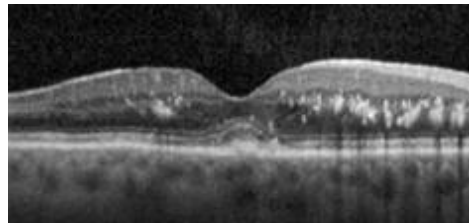
Intermediate AMD
Drusen and pigmentary changes
Altered visibility of Henle's Fibre Layer



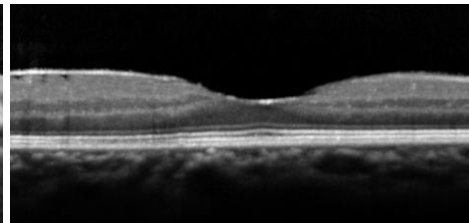
Central serous chorioretinopathy
Serous PED and subretinal fluid
Pachy- (thick) choroid



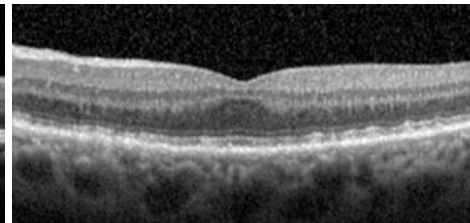
Myopic foveoschisis
Schisis cavities
↑ visibility of choroid sclera junction



Diabetic retinopathy
Hard exudates and haemorrhages



Epiretinal membrane
Fibrosis



Foveal hypoplasia
Abnormally flat foveal pit

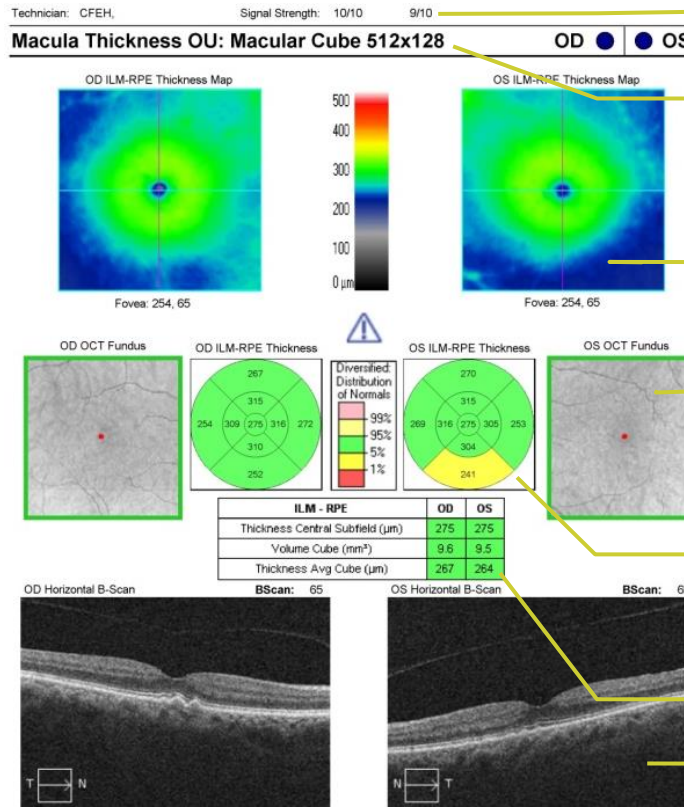
Step 3. Evaluate the macular thickness and/or other reports

The normative classification may depend on the representativeness of the normative database, including variables such as age, ethnicity, refraction and number of subjects.

The quality or continuity of the thickness map may depend on the instrument's automated algorithms for finding the fovea and segmentation. All results should be evaluated for inter-eye asymmetry.

Other report options include variations of:

- Macular thickness change analysis
- Advanced RPE analysis
- Ganglion cell analysis
- Asymmetry analysis
- Structure-function analyses



Signal strength provides an indication of scan quality.

Scan density for this report, there are 128 horizontal B-scans. Each is comprised of 512 A-scans, covering a 6x6mm area. Denser scans decrease the likelihood of missing small lesions.

Thickness maps represent the raw data across the cube, colour coded using the central scale. Misaligned scan maps should be interpreted with caution.

Fundus reference image acquired in this case using a line scanning ophthalmoscope.

ETDRS thickness grid colour coded based on each subfield's classification according to the normative database (legend shown in the centre) and automatically centred on the fovea. The diameter of the inner, middle and outer circles is 1mm, 3mm and 6mm respectively.

Summary parameters relating to the whole cube scan.

Horizontal scans through the instrument identified fovea.

Step 4. Be wary of artefacts

Patient dependent (eye-related)

- Blink
- Motion, lack of fixation
- Media opacities

Acquisition dependent (operator-related)

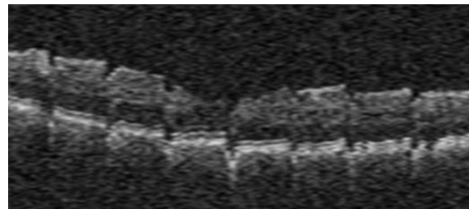
- Vignetting, small pupils
- Truncation

Instrument dependent (OCT-related)

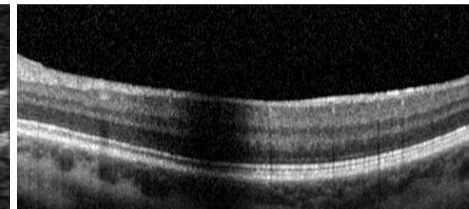
- Posterior shadowing
- Cut-edge or mirror artefacts

Software algorithm errors

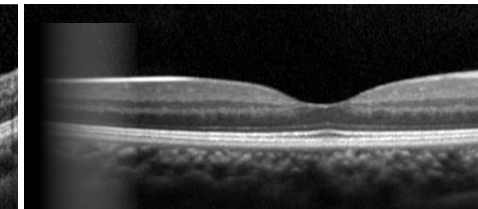
- Segmentation errors
- Misidentification of the fovea



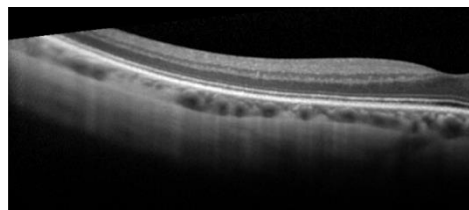
Eye movement



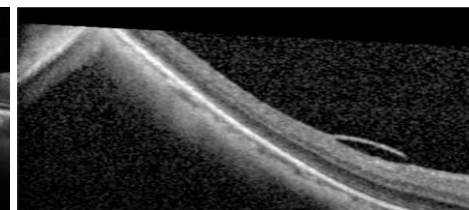
Media opacities



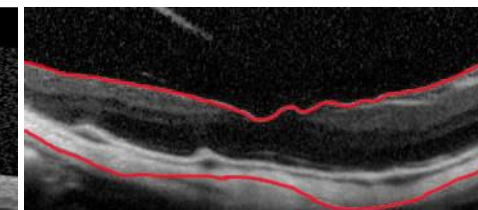
Vignetting



Truncation



Mirror artefact



Segmentation error

Landscapes of the macula

