

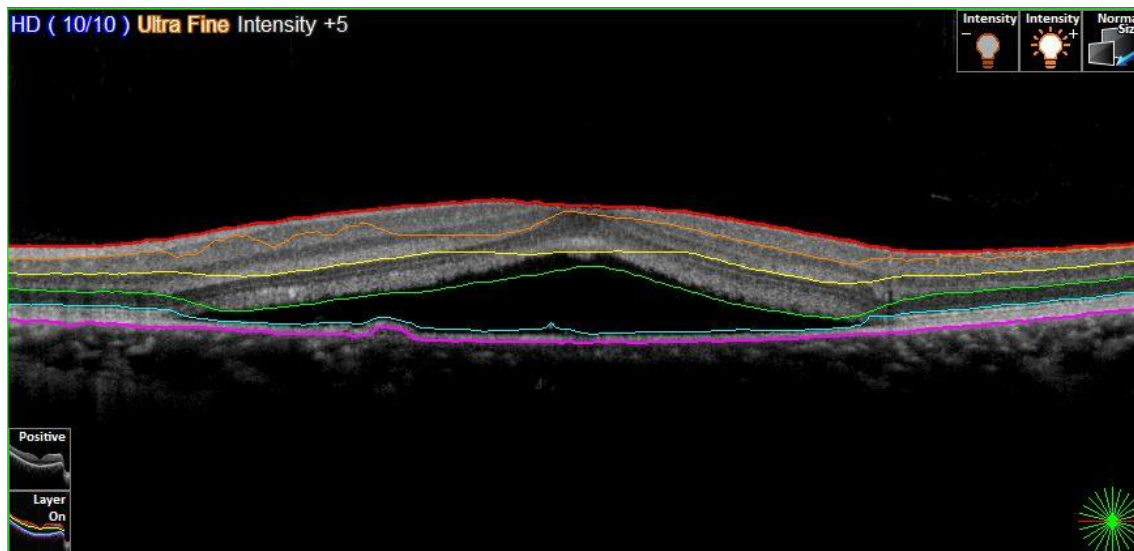


NAVIS-EX - Retinal layers, en-face data, Panorama and measurement function

Using the Retinal Layers Function

Sometimes when viewing pathology on a B-Scan you may be unsure which layers of the retina are affected, and therefore unsure of a differential diagnosis. By switching on the layers of the retina to overlay on the B-Scan, it may help you diagnose pathology.

Fig. 1 – Layers of the Retina



Click on the Layers button – choose all layers, or switch on / off certain layers

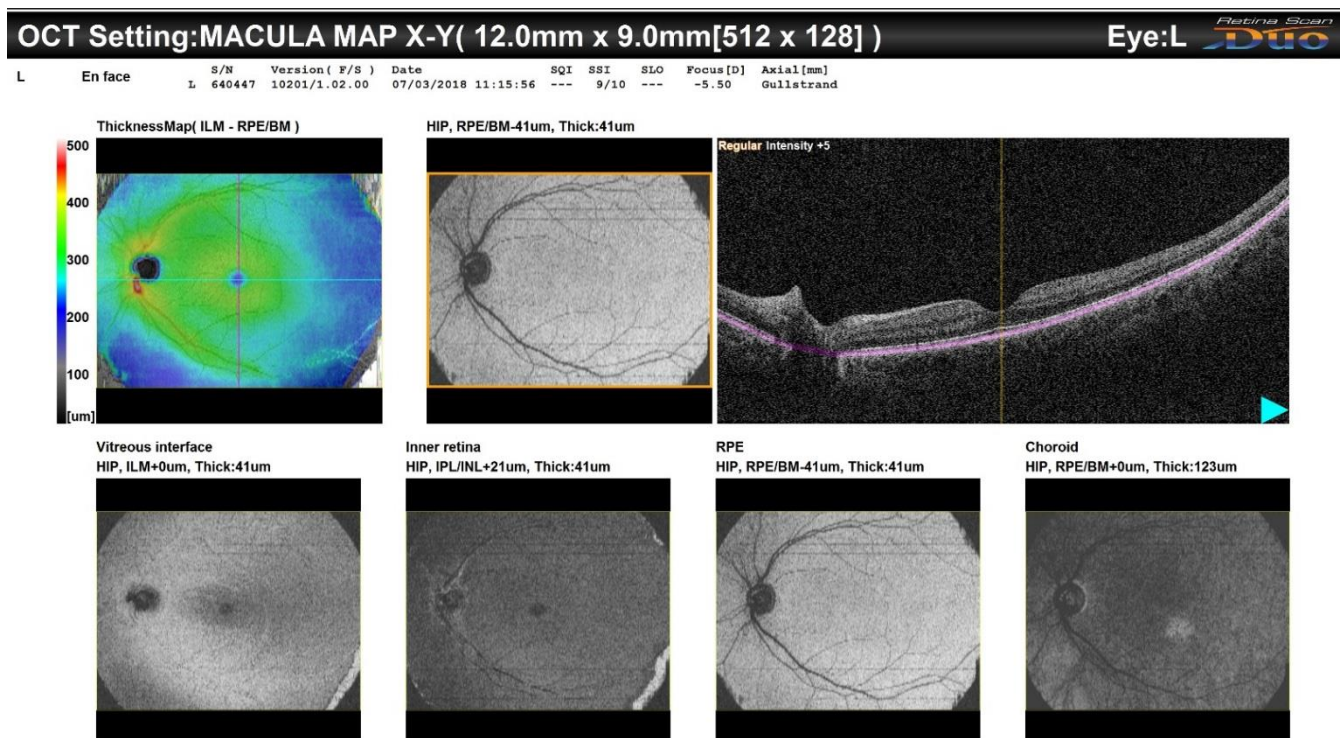
TIP! – With very large lesions or distortions to the retinal layers, NAVIS-EX may have difficulty distinguishing the different layers.

TIP! – This can be especially useful if you are unsure if a lesion is intra or sub retinal, or for differentiating pathology such as CSR from a PED.

En-Face data

En-face data is still looking at the same OCT information, but instead of a 'slice' through the tissue as in a b-scan image, this is looking at the OCT data in a top-down view. In this way you can view the whole of the scanned area in one go, but it also allows you to sink down through the depth of the retina to view the tissue at varying depths.

Fig. 1 – En-face presentation



TIP! - The en-face tab will display set depths, but it is also possible to view any depth by adjusting the 'base layer' arrows.

TIP! – By knowing which layers / depth a lesion is located, it will help you to recognise which pathology may be present (eg. *ERM's occur superficially, naevus occur in the choroid*)

TIP! – As you can see the whole of the scanned area at once, it is much easier to locate isolated lesions.

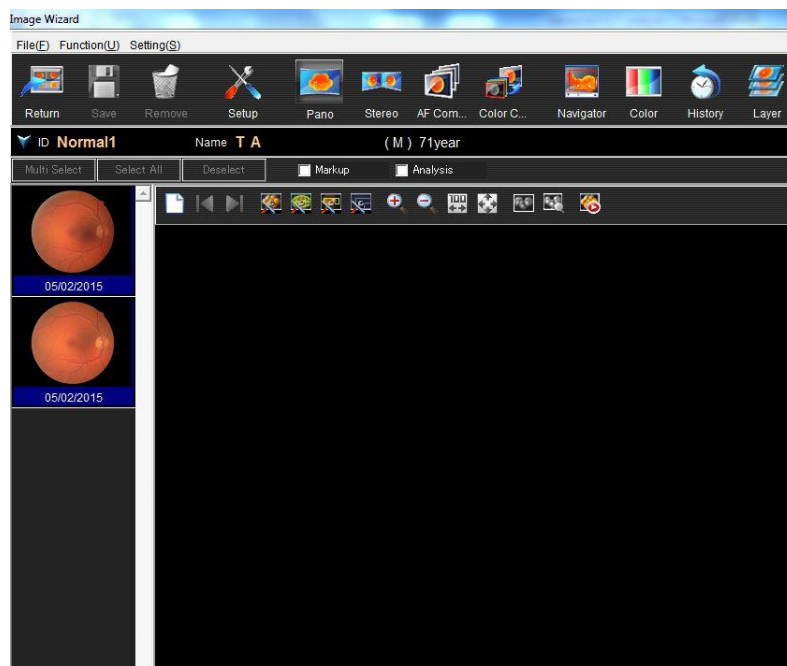
TIP! – Using en-face imaging when you suspect a potentially swollen disc is particularly useful as you can see if the ONH is distorted or help you to differentially diagnose normal variations such as optic disc drusen.

Panorama Image Function

It is possible to create a panoramic image of the fundus by digitally stitching together multiple fundus images of the same eye.

Firstly, capture all the images in the normal way. Then select all the images you wish to 'stitch' together, then *right click* and select image wizard → Panorama.

Fig. 1 – Image Wizard



The easiest method is to use the '*Auto Image Line Up*' function. If the software can find enough reference points on the images, they will be stitched together. If the software cannot find enough reference points, you can drag each image into the stitching area and line them up manually. Then click '*Execute composition*' to create the panoramic image. Ensure you save the composite image, so it is available to be viewed back in the Px file.

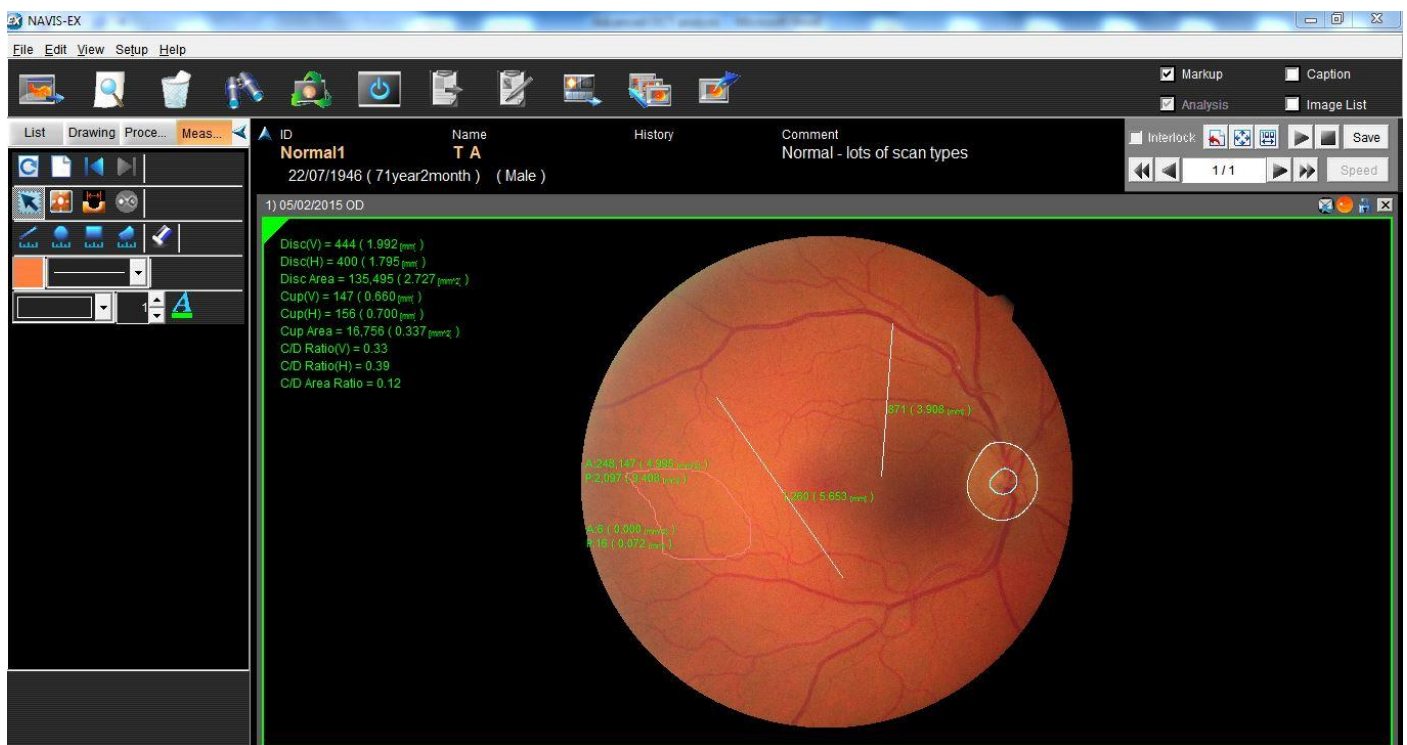
TIP! – The Patient ideally needs to be dilated to get good images in all gazes. Under or over exposed images will make it much more difficult for the software to find reference points during the stitching process.

TIP! – You don't need to do all the images to stitch them together. NAVIS-EX can stitch together 2 or more images.

Measurement (Images)

It is possible to create measurements on a fundus photo. The measurement function is found in the upper LHS of the Px file. ONH, Disc / cup parameters, or any other position on the fundus image can be measured and the data is displayed accordingly. All measurements are to their relative scale.

Fig. 1 – Measurement mode



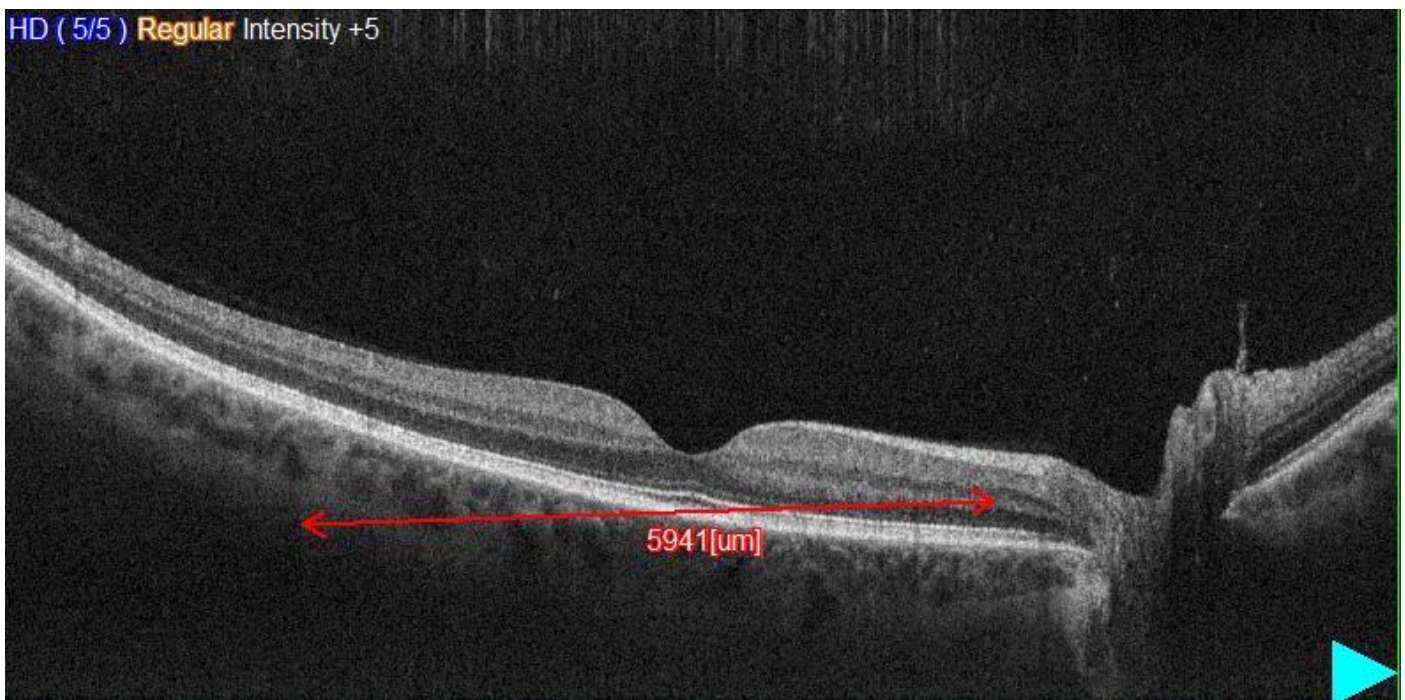
TIP! – If you are capturing OCT scans at the same time as a fundus image, most of the disc measurements are already calculated.

TIP! – Once saved, you can show or remove the measurements by selecting / deselecting the analysis box in the upper RHS.

OCT

Similarly, OCT b-scans can have measurement callipers applied. On the b-scan image, *right click* and select measurement. The callipers can then be positioned anywhere on the b-scan and the measurement will be displayed to the correct relative scale.

Fig. 2 – b-scan measurement



TIP! – You can place up to two callipers on the same scan image to measure different areas.

TIP! – You can combine the measurement function with the retinal layers function and any of the image colour presentations (ie. +ve B/W, -ve B/W, etc).