SPECTRALIS®

Posterior Pole Asymmetry Analysis

Asymmetry is a hallmark of glaucoma. Posterior Pole Asymmetry Analysis can help identify early glaucomatous damage.

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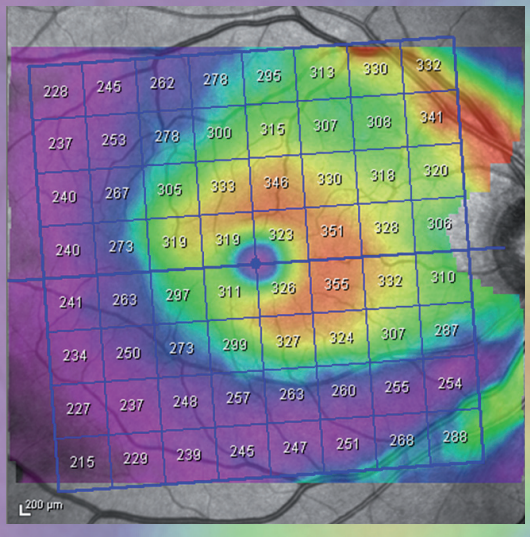
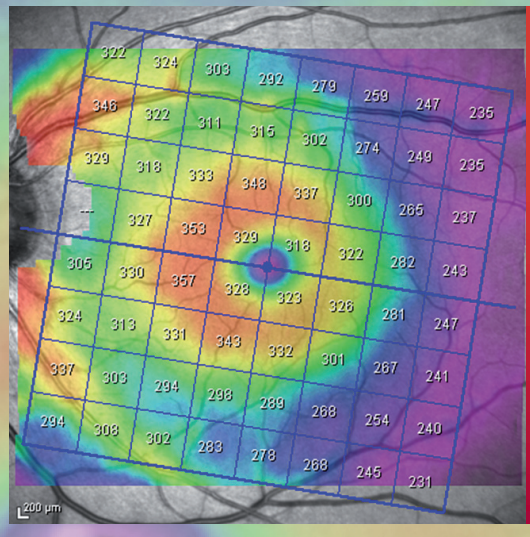
Glaucoma is a disease that manifests by loss of ganglion cells and axons across the central posterior pole, where the ganglion cells are most concentrated. Retinal thickness reflects glaucomatous damage by marked thinning in the zone surrounding the fovea, extending towards the optic nerve head.

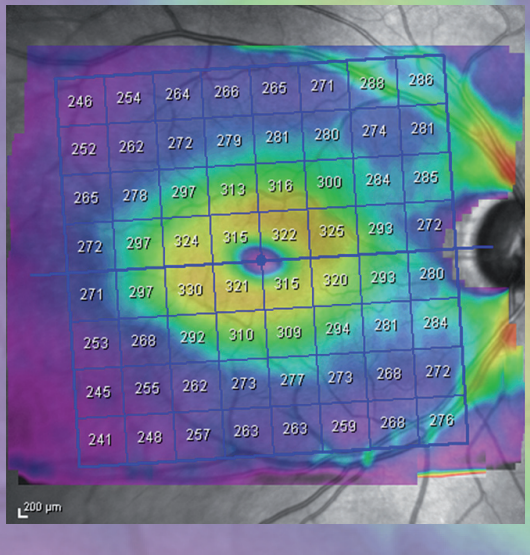
The SPECTRALIS OCT Posterior Pole Asymmetry Analysis combines mapping of the posterior pole retinal thickness with asymmetry analysis between eyes and between hemispheres of each eye.

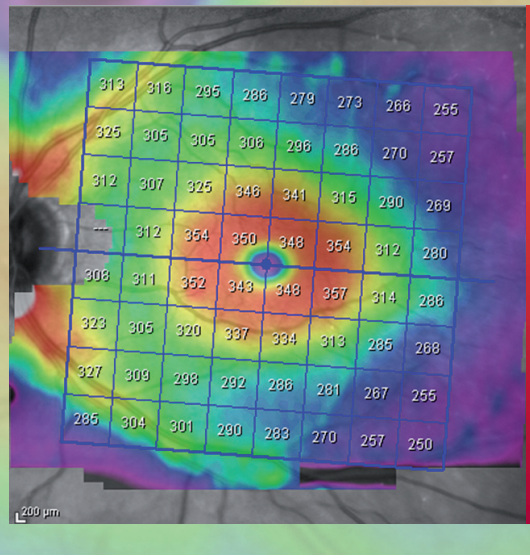
RNFL measurements combined with retina thickness measurement gives a much more robust parameter for glaucoma.





Case 1:
Retinal thickness map of a glaucomatous eye and its fellow eye. Note the severe localized thinning in the inferotemporal region of the right eye. Asymmetry between eyes and hemispheres illustrates damage.





Case 2:
Retinal thickness map of the right eye shows a significant thinning infero- and superotemporally. A clear asymmetry between eyes becomes visible.

How to Interpret the Asymmetry Analysis

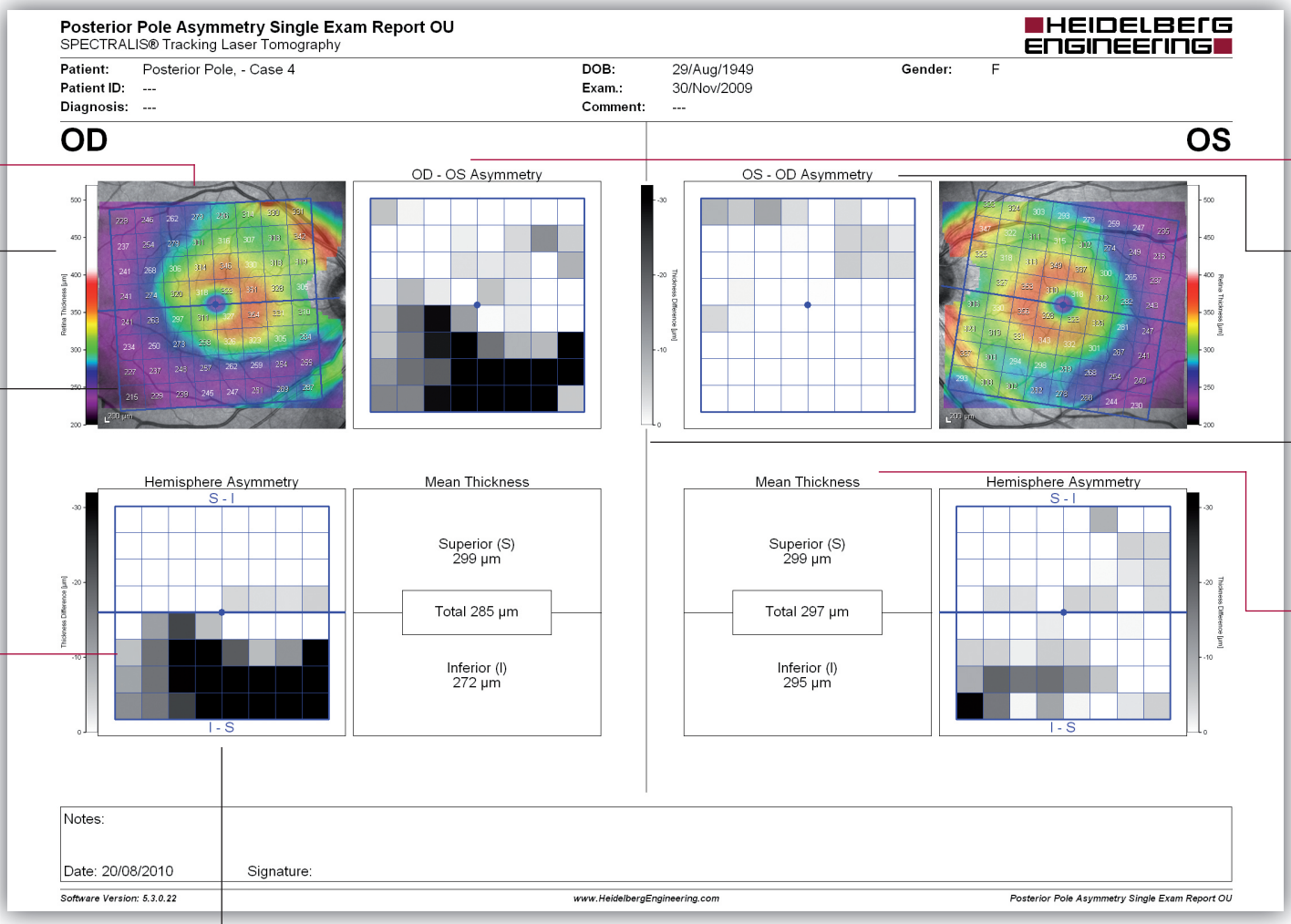
Posterior Pole Retina Thickness Map
Displays the retinal thickness over the entire posterior pole (30° x 25° OCT volume scan) for each eye.

Compressed Color Scale
Used to localize even the smallest differences in retinal thickness.

8x8 Analysis Grid
An 8x8 grid is positioned symmetrically to the fovea-disc axis. For each cell of the grid the mean retinal thickness is given.

Hemisphere Analysis
Displays the asymmetry between the superior and inferior hemisphere. The fovea-disc axis is the horizontal symmetry line. For each cell of one hemisphere, the mean retina thickness is compared to the value in the corresponding cell for the opposite hemisphere.

I-S Asymmetry Map
The lower half compares the inferior to the superior hemisphere.



OU Asymmetry
The mean retinal thickness in each cell of the 8x8 grid in one eye is compared to the thickness in the corresponding cell of the fellow eye.

OS-OD Asymmetry Map
Compares the left eye to the right eye.

Asymmetry Color Scale
Darker grey indicating larger differences. The closer the value is to zero (white color), the better the symmetry.

Mean Thickness
Represents the mean retinal thickness for the superior and inferior hemisphere as well as the total mean thickness over the entire 8x8 grid.

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