

# A Cirrus HD-OCT Case Report

## AMD Drusen

### The Patient

A 79 year old female Caucasian patient with known dry age-related macular degeneration was referred to the retinal department by her private ophthalmologist. Her right eye had been poor for a few years and she noticed a slight decrease of the visual acuity of her left eye.

### The Details

Visual acuity examination was performed on both eyes and yielded counting fingers (right eye) and 20/32 (left eye). Dilated fundus examination of her right eye revealed advanced geographic atrophy with calcified drusen remnants. On her left eye confluent soft drusen and central retinal pigment epithelium (RPE) hyperplasia were seen ophthalmoscopically without clinical evidence of edema or neovascularization (see fundus photograph, Figure 1).

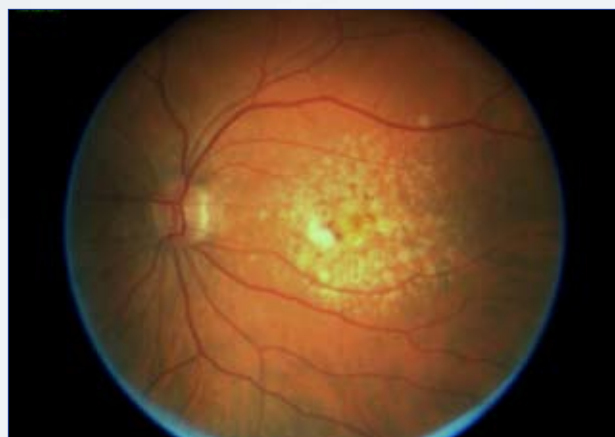


Figure 1

### The HD Difference

Cirrus HD-OCT scans:

The single tomogram slice shows in great detail the changes at the level of the retinal pigment epithelium. Automated segmentation of the retinal pigment epithelium precisely follows the pathologic changes throughout the scanned area (Figure 2).

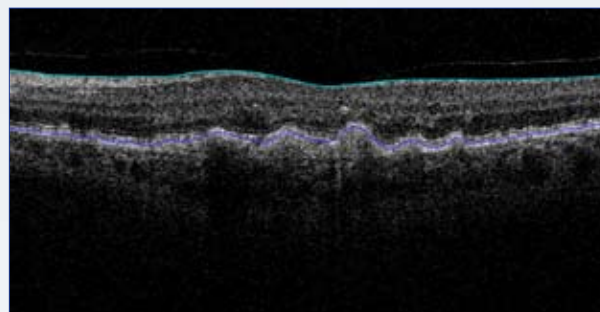


Figure 2

The view of the ILM layer map (Figure 3) does not show any irregularities whereas the RPE layer map (Figure 4) shows numerous elevations of different sizes.



Figure 3

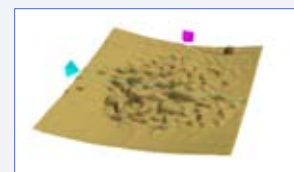


Figure 4

The HD thickness map (Figure 5) does not suggest any pathologic changes, which corresponds with the numbers in the quantitative 9-field thickness map (Figure 6).

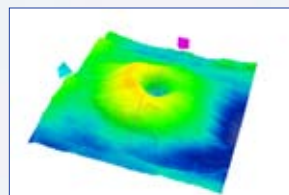


Figure 5

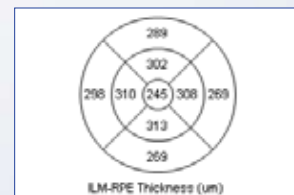
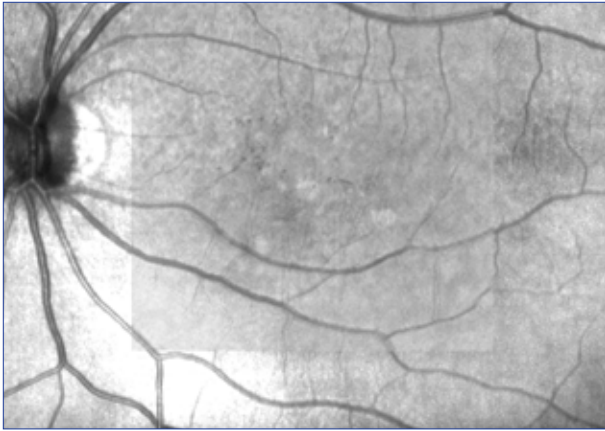
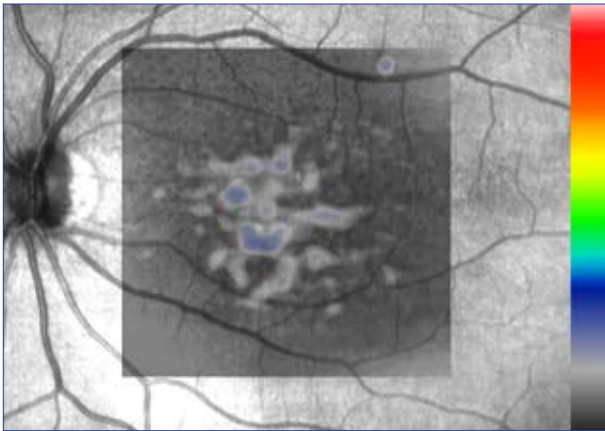


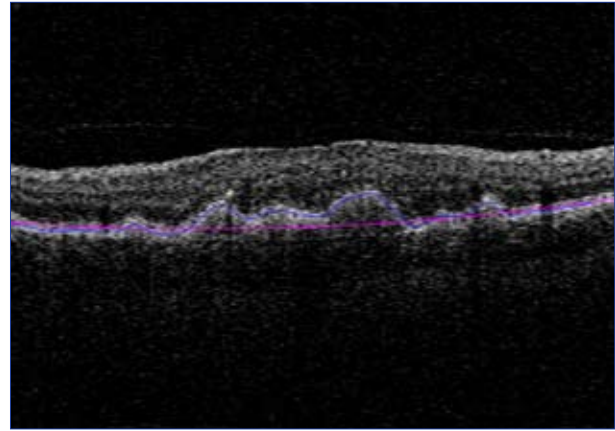
Figure 6



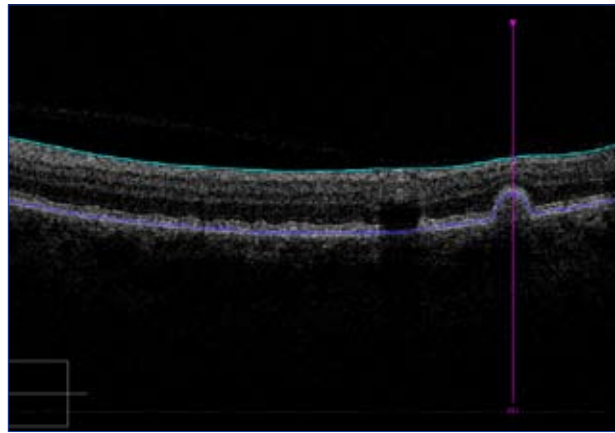
**Figure 7.** One feature of the Cirrus® analysis software is a combined illustration of the scanned LSO image overlaid on the acquired OCT fundus image. This information can be helpful to assess the precision of the actual scan. This figure shows that both image modalities are in very good agreement.



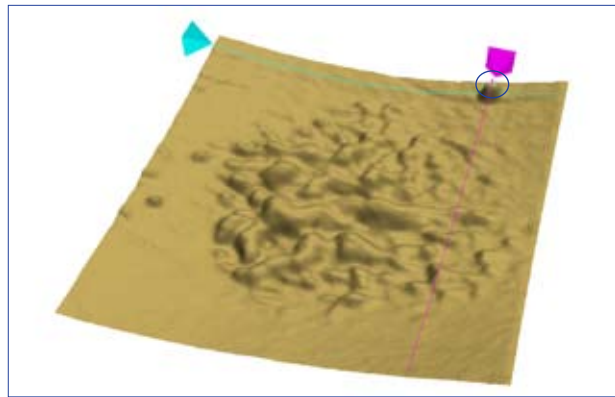
**Figure 8.** The divergence of the recognized RPE and the RPE fit is also displayed in an enface RPE deviation map overlaid on the LSO fundus image. Elevation of the deviation is indicated in color-coded topography format.



**Figure 9.** An example of a single tomogram with algorithm findings for the RPE (blue line) and an assumed flat comparison, or RPE fit, (magenta) is shown above.



**Figure 10.** HD cross-sectional image of the superotemporal part of the scanned area, one single RPE elevation is noticeable among almost flat RPE.



**Figure 11.** The slide navigator markers on the RPE layer map precisely indicate the corresponding position on the full 3D area. (see circle).