

CANON USA
EYE CARE SOLUTIONS

Fundus Autofluorescence
Take the Test

What is Fundus Autofluorescence?

- **Fundus autofluorescence (FAF) imaging is an in vivo imaging method for metabolic mapping of naturally or pathologically occurring fluorophores of the ocular fundus.**
- **FAF provides information about the well-being of the retinal pigment epithelium (RPE).**
- **Although the retina has many fluorophores, the fluorescence is derived mainly from the lipofuscin.**
- **Lipofuscin is an ocular pigment and by-product of intracellular metabolism in the photoreceptors and RPE.**
- **Excess lipofuscin creates autofluorescence.**





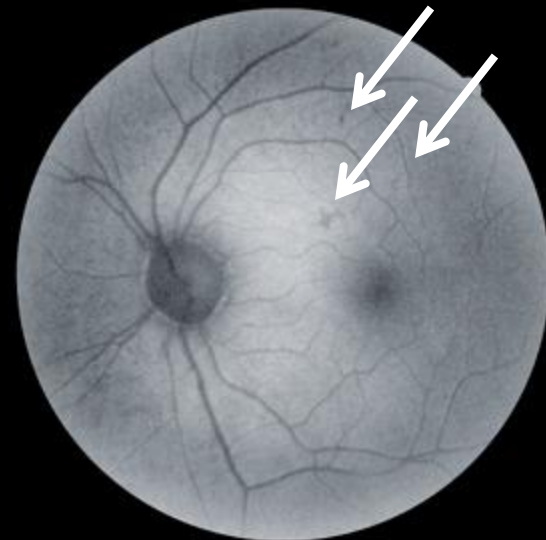
Case #1

Explanation

Female, 65 years

VA 1.5 OS

- The colored image shows presence of a few hard drusen superior to the macula and in the fovea.
- The FAF shows some dark spots indicating minor RPE damage which are only partly correlated to the drusen seen in the colored image.







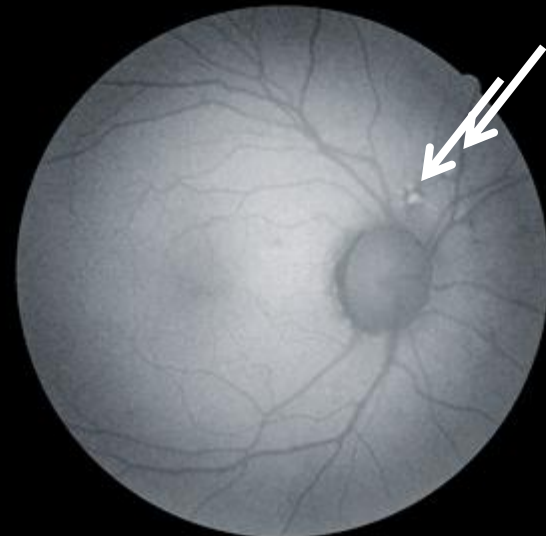
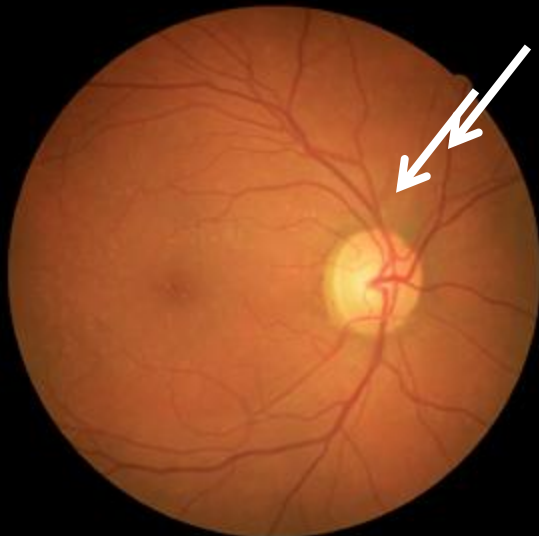
Case #2

Explanation

Female, 70 years

VA 1.2 OD

- The colored image shows multiple hard drusen in the macula and fovea.
- The FAF shows irregular AF mainly superior to the papillae indicating ongoing RPE changes.







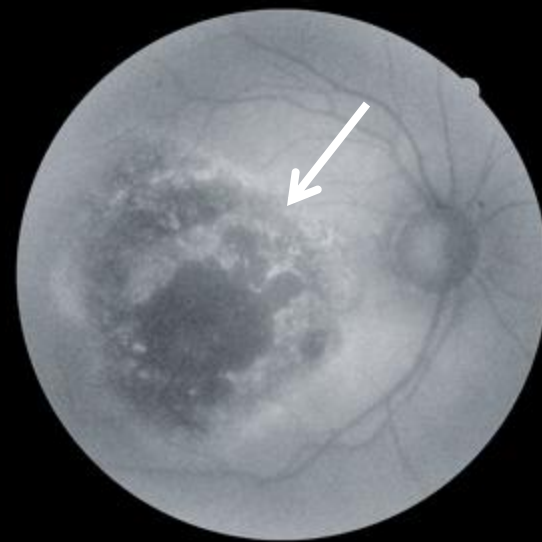
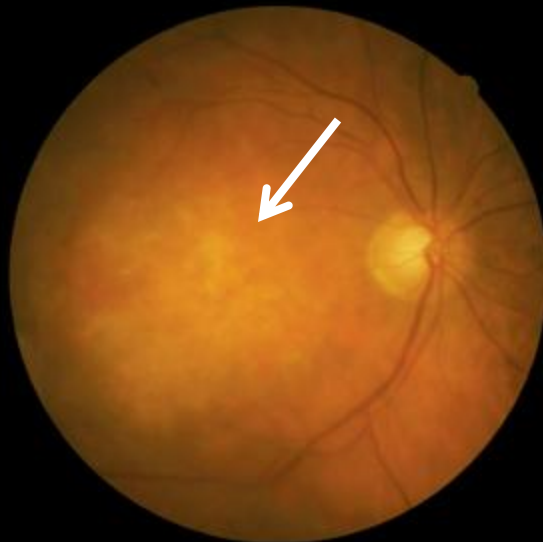
Case #3

Explanation

Female, 67 years

VA 0.5 OD

- Patient previously treated for neovascular AMD in right eye.
- The colored image shows soft drusen and RPE changes.
- FAF image shows a lack of AF in large areas due to pigment epithelial atrophy (dark areas) and AF irregularities near the atrophic patches (bright areas).
- The FAF illustrates the severity of the changes in relation to VA.







Case #4

Explanation

Female

VA 1.0 OD

- The colored image shows soft drusen and RPE changes.
- FAF image shows AF irregularities indicating ongoing RPE changes (bright spots) and damage (dark spots).







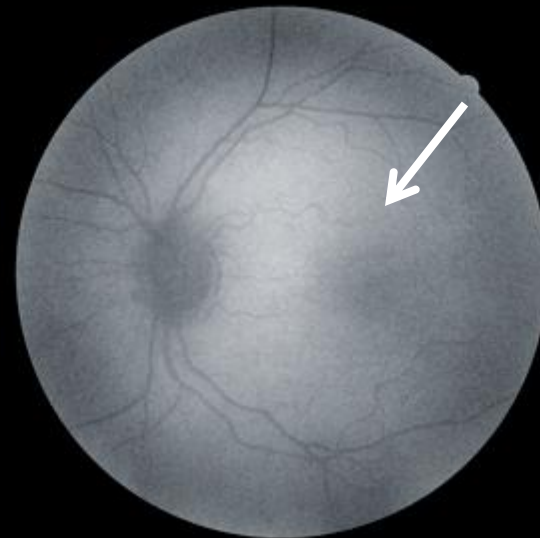
Case #5

Explanation

Male, 60 years

VA 1.2 OS

- The colored image shows hard drusen as well as a few soft drusen in the macula. The FAF appears normal.



Case #6

Color



Image Taken with Canon FAF Camera



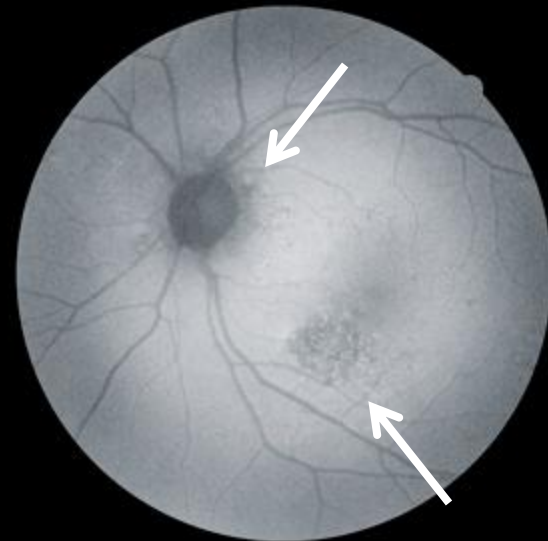
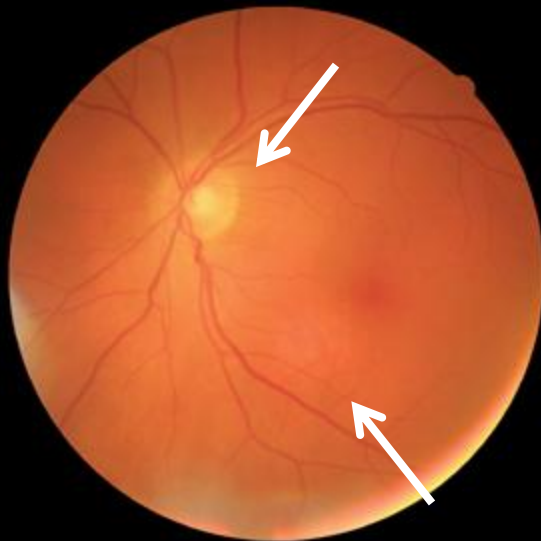
Case #6

Explanation

Male

VA 1.0 OD

- The colored image shows discrete macular changes with some atrophic areas.
- The FAF shows variations in AF pattern in the macula and around the papillae indicating ongoing RPE changes (bright dots) and RPE damage (dark areas).



Case #7

cOLOR



Image Taken with Canon FAF Camera



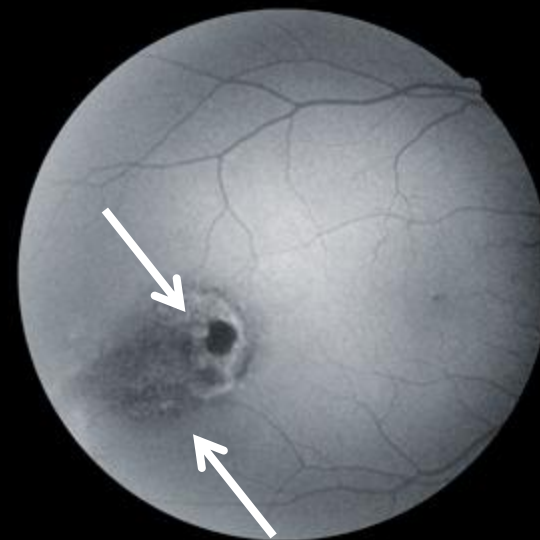
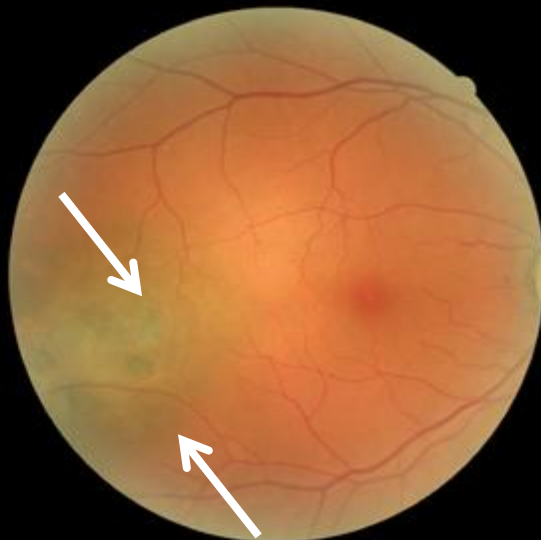
Case #7

Explanation

Female, 58 years

VA 1.0 OD

- Choroidal malignant melanoma with overlying orange pigment.
- Corresponding FAF-picture shows areas of both hypo- and hyperfluorescence where the melanoma is located. The area of increased
- AF corresponds to the areas of orange pigment.



“ With the extra feature of FAF photography we have discovered retinal changes we have not seen before and which makes us learn more about retinal changes and diseases every day we use the Canon CR-2 Plus retinal camera ”

Rune Brautaset BSc (Hon), Mphil, PhD, Associated professor and Head of Unit and director of studies,
Unit of Optometry/Optometry Education, Karolinska Institutet, St Erik's Eye Hospital, Stockholm, Sweden

Canon Digital Retinal Camera line up with FAF:



CX-1



CR-2 Plus AF