

Supplementary Online Content

Song H, Rossi EA, Yang Q, Granger CE, Latchney LR, Chung MM. High-resolution adaptive optics in vivo autofluorescence imaging in Stargardt disease. *JAMA Ophthalmol*. Published online March 21, 2019. doi:10.1001/jamaophthalmol.2019.0299

eFigure 1. Multimodal imaging of Patients 1 and 3

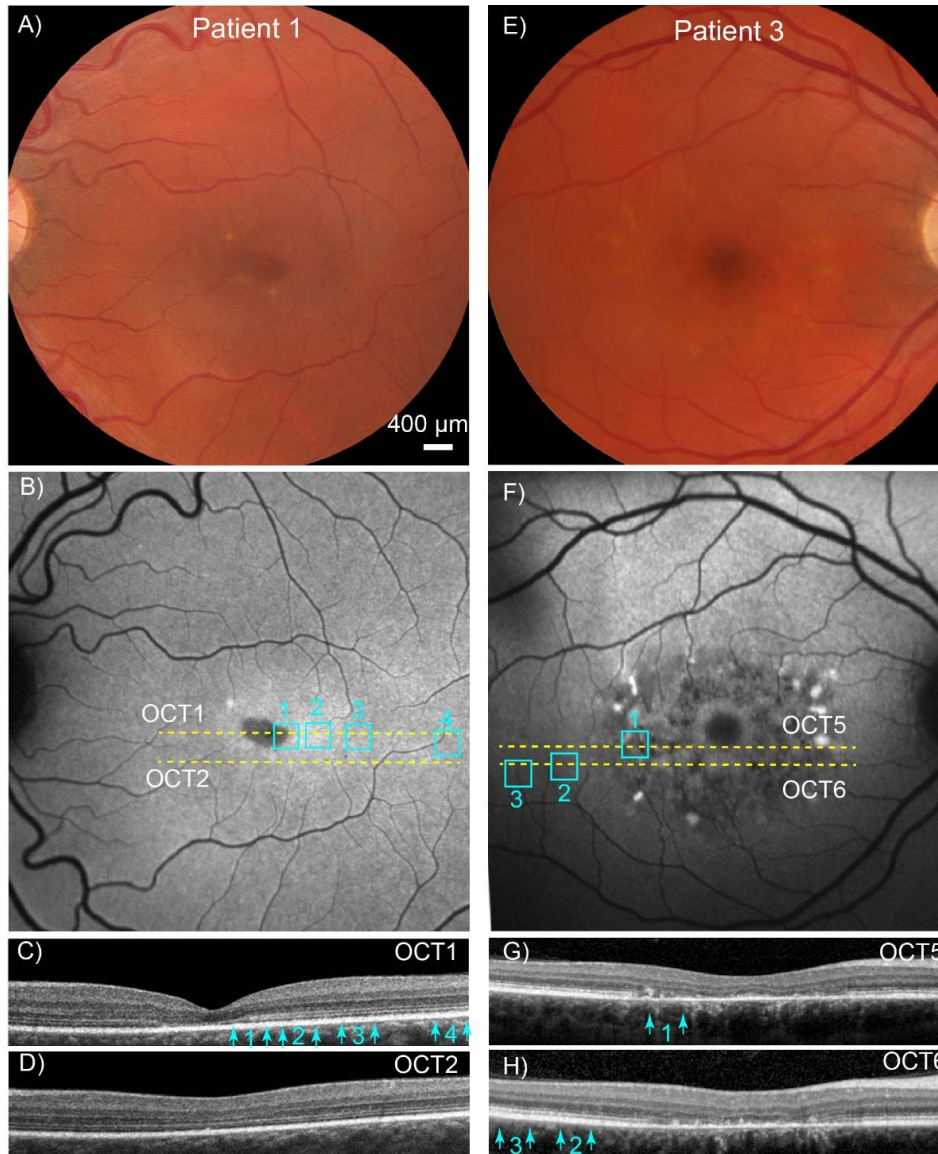
eFigure 2. AOSLO imaging near the fovea. (0.5 mm eccentricity)

eFigure 3. AOSLO imaging at the transition zone

eFigure 4. AOSLO imaging in the periphery

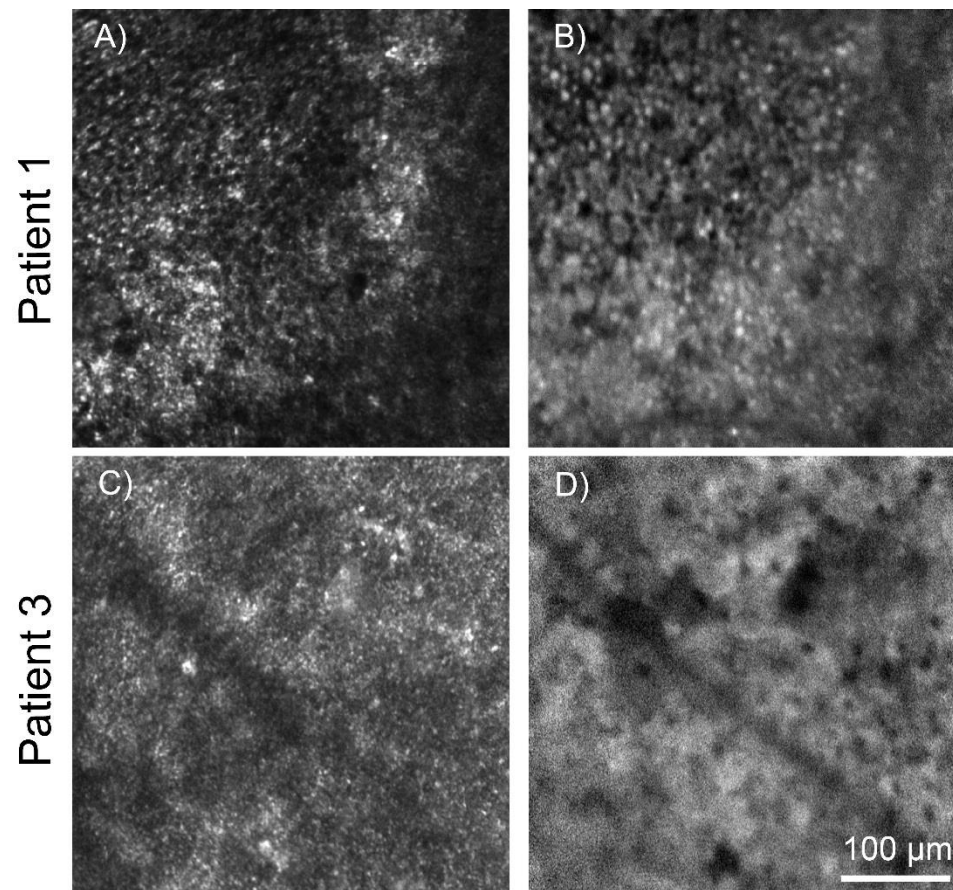
This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. Multimodal imaging of Patients 1 and 3



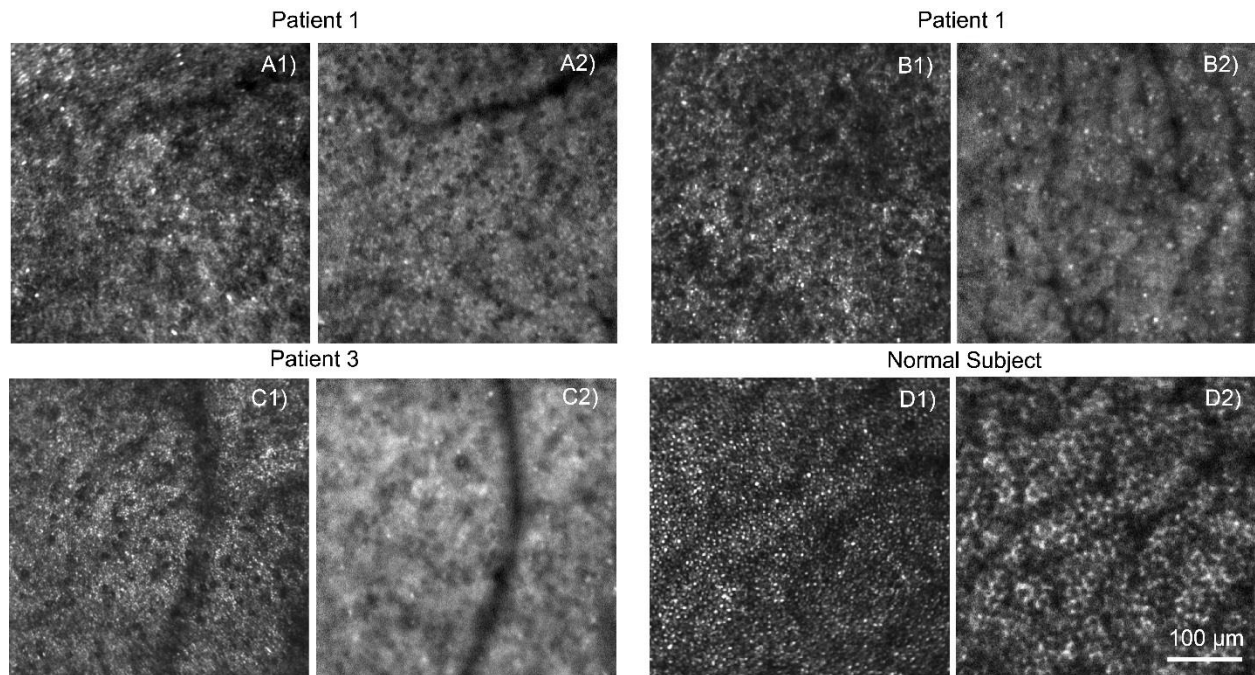
Top row, color fundus photographs show macular atrophy with surrounding flecks. Second row, conventional FAF. B) Patient 1 shows a small central hypo-AF with surrounding annulus of hyper-AF and homogeneous AF farther peripherally. F) Patient 3 shows central hypo-AF with a wreath of stippled hypo-AF spots, surrounded by hyper-AF flecks. The peripheral AF is uniform. Yellow lines indicate position of SD-OCT scans shown in third and fourth rows. C-D), G-H) SD-OCT confirms atrophy of the RPE and outer retina in the central macula, with normal layers peripherally. Blue squares in the second row indicate the locations of the AOSLO images shown in eFigures 2 & 3; blue arrows on SD-OCT scans also indicate these locations.

eFigure 2. AOSLO imaging near the fovea. (0.5 mm eccentricity)



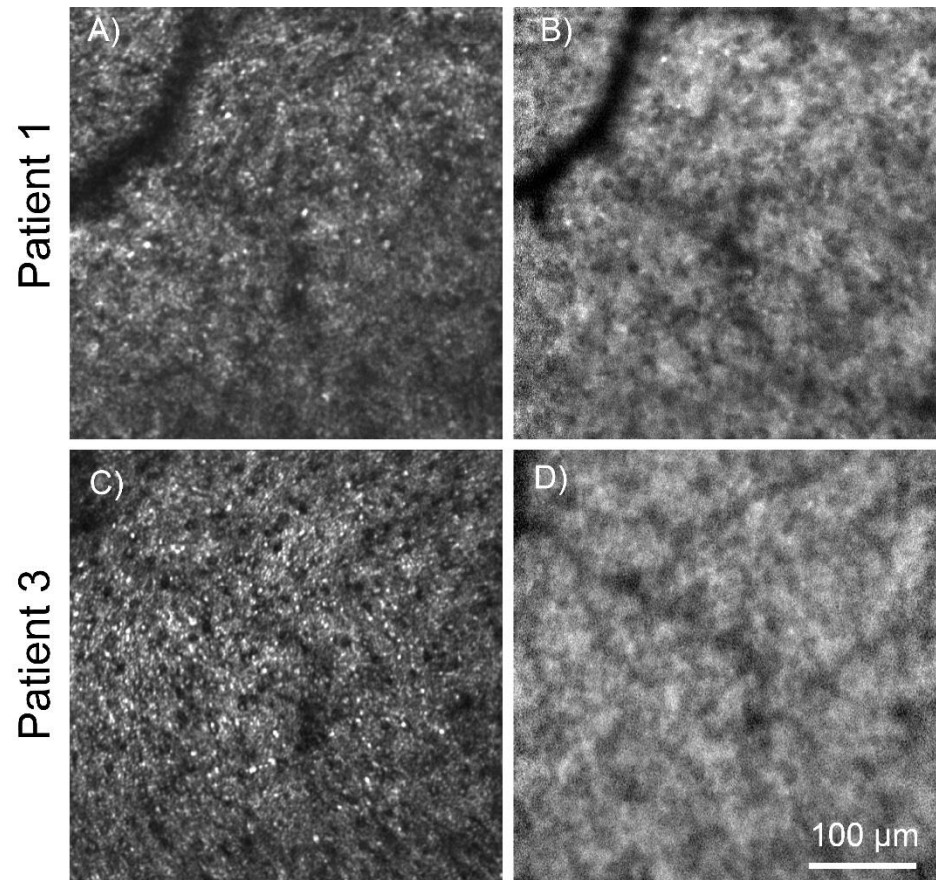
Confocal reflectance AOSLO (left column) and short wavelength AF AOSLO (right column) show A) RPE like structures in reflectance AOSLO. B) AOSLO AF that is consistent in structure with photoreceptors (particularly in the upper left quadrant of the image). C) No photoreceptors are identified. D) Scattered hypo- and hyper-AF features without cellular structure. The locations marked by blue boxes “1” in eFigure 1 corresponds to the AOSLO imaging locations shown here.

eFigure 3. AOSLO imaging at the transition zone



Panels A1, B1, C1 reflectance images show abnormally enlarged rods and cones. Panel A2, B2, C2 show abnormal AF structure appearing more consistent in appearance with photoreceptor reflectance than that of RPE cells. For comparison, panels D1 and D2 show photoreceptor and RPE AF images in a normal subject at 1.8 mm eccentricity. The locations imaged in A) and B) are indicated by blue boxes “2” and “3” in Figure 1B, and C) is box “2” in Figure 1F.

eFigure 4. AOSLO imaging in the periphery



A) and C) reflectance images show photoreceptor structures more consistent with normal photoreceptors. B) and D) FAOSLO images exhibit a pattern consistent with the RPE cell mosaic. AOSLO image locations are denoted by the blue boxes shown in eFigure 1 (square 4 for Patient 1 and square 3 for Patient 3)