

Supplementary Online Content

Ong SS, Cummings TJ, Vajzovic L, Mruthyunjaya P, Toth CA. Comparison of optical coherence tomography with fundus photographs, fluorescein angiography, and histopathologic analysis in assessing Coats disease. *JAMA Ophthalmol*. Published online November 21, 2018. doi:10.1001/jamaophthalmol.208.5654

eFigure 1. Fundus photograph (A) and optical coherence tomography, OCT (B) from an 18-year-old male with Coats' disease and macular exudates.

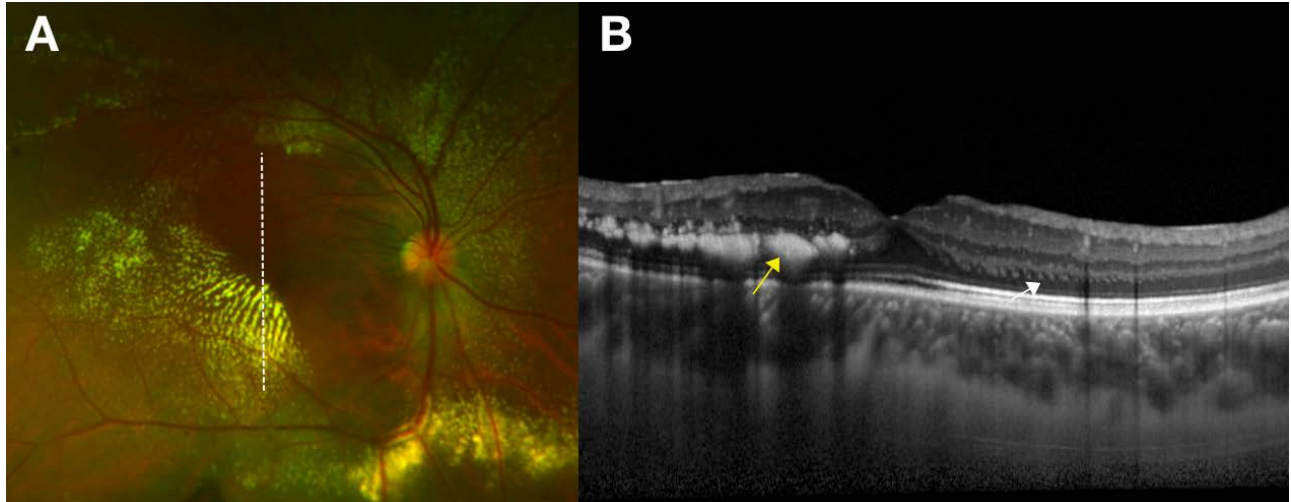
eFigure 2. Fundus photograph (A), fluorescein angiography, FA (B), and optical coherence tomography, OCT (B) from a 4-year-old boy with Coats' disease and a fibrotic nodule

eFigure 3. Fundus photograph (A), fluorescein angiography, FA (B) and optical coherence tomography, OCT (C) from an 18-year-old male with Coats' disease and intraretinal cystoid spaces associated with atrophy.

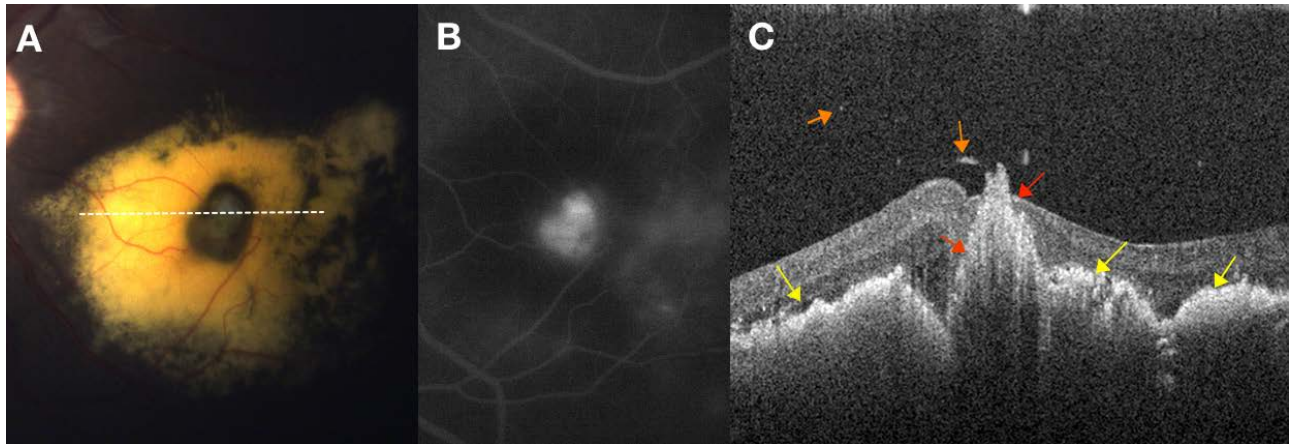
eFigure 4. Fundus photograph (A), fluorescein angiography, FA (B) and optical coherence tomography, OCT (C) from a 4-year-old male with Coats' disease and intraretinal cystoid spaces associated with angiographic leakage.

eFigure 5. Fundus photograph (left panel) and optical coherence tomography, OCT (right panel) from a 4-year-old boy with Coats' disease who developed fibrotic nodules over time.

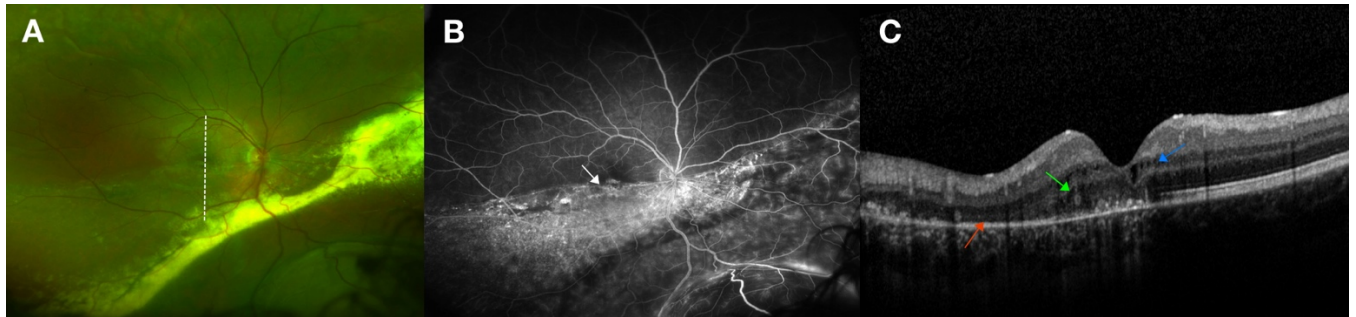
This supplementary material has been provided by the authors to give readers additional information about their work.



eFigure 1 Fundus photograph (A) and optical coherence tomography, OCT (B) from an 18-year-old male with Coats' disease and macular exudates. Exudates on OCT appear as hyperreflective foci and broad sheets in the inner nuclear layer, outer plexiform layer and outer nuclear layer (yellow arrow). The exudates are predominantly in the upper half of the outer nuclear layer (or Henle fiber layer) and correlated with star shaped exudates on fundus photograph. The petaloid configuration of the Henle fiber layer is visible on the unaffected side of the retina on OCT (white arrow). *The vertical white dotted line on the photograph corresponds to the OCT line scan.*



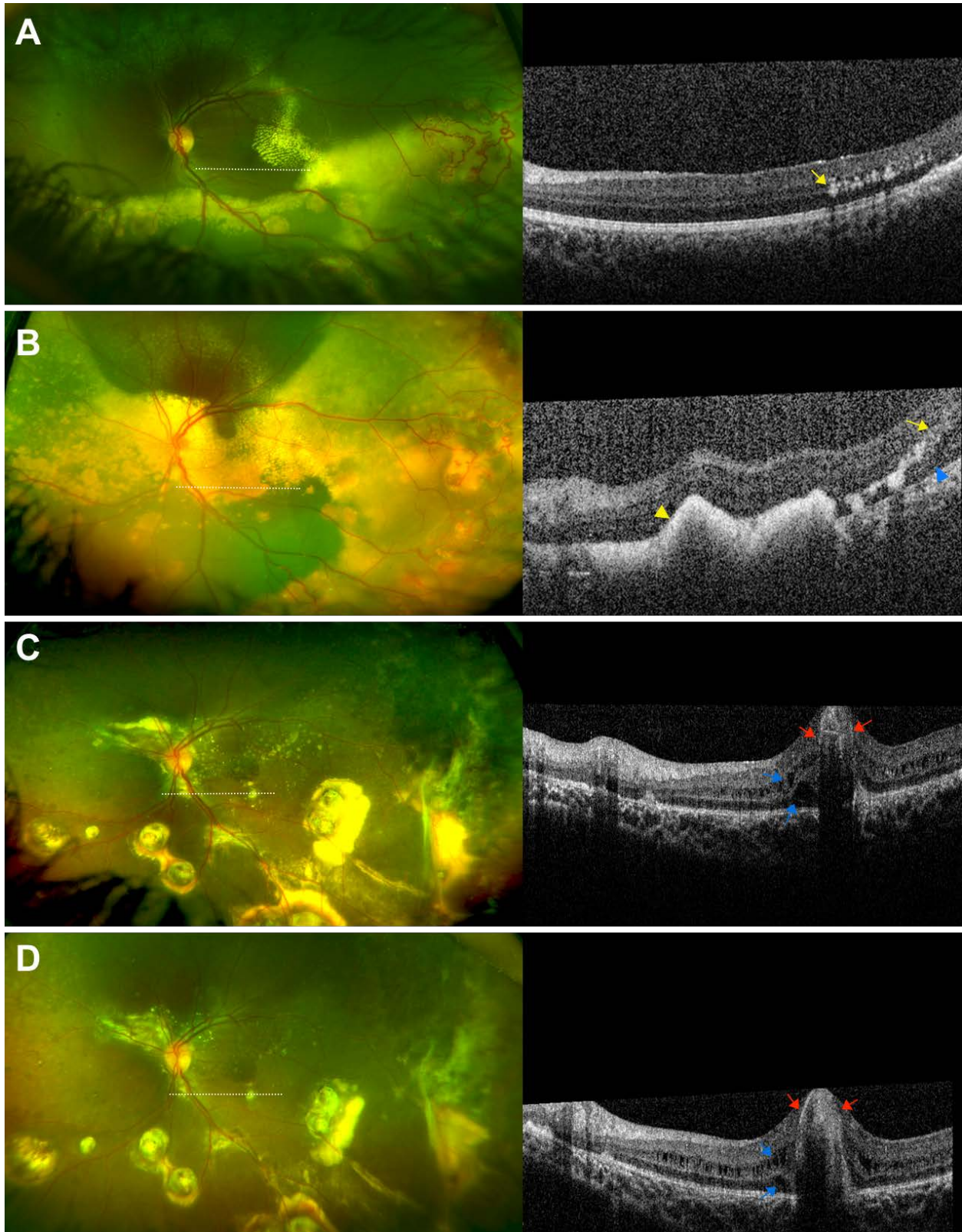
eFigure 2 Fundus photograph (A), fluorescein angiography, FA (B), and optical coherence tomography, OCT (B) from a 4-year-old boy with Coats' disease and a fibrotic nodule (same eye in Figure 3A). Photograph shows a foveal fibrotic nodule that is surrounded by dense exudates. FA illustrates late staining of the nodule. On OCT, the nodular material (red arrows) is seen transversing all layers of the retina and into the vitreous presumably through a macular hole. The nodule is also surrounded by dense subretinal exudates (yellow arrows) and accompanied by atrophy of the overlying retinal layers. There are small preretinal hyperreflective OCT dots (orange arrows). *The vertical white dotted line on the photograph corresponds to the OCT line scan.*



eFigure 3 Fundus photograph (A), fluorescein angiography, FA (B) and optical coherence tomography, OCT (C) from an 18-year-old male with Coats' disease and intraretinal cystoid spaces associated with atrophy. FA shows window defect in the area of atrophy (white arrow). The cystoid spaces on OCT are located in the inner nuclear layer (blue arrow). The red arrow points to atrophy of the outer nuclear layer and ellipsoid zone, attenuation of the outer plexiform layer and disruption of the retinal pigment epithelium. A hyperreflective tubule is also observed (green arrow). *The vertical white dotted line on the photograph corresponds to the OCT line scan.*



eFigure 4 Fundus photograph (A), fluorescein angiography, FA (B) and optical coherence tomography, OCT (C) from a 4-year-old male with Coats' disease and intraretinal cystoid spaces associated with angiographic leakage. FA shows leakage in the temporal macula (white arrow). The cystoid spaces on OCT are located in the outer nuclear layer (blue arrow) and encircled by exudates in the outer plexiform layer and outer nuclear layer (yellow arrow). *The horizontal white dotted line on the photograph corresponds to the OCT line scan.*



eFigure 5 Fundus photograph (left panel) and optical coherence tomography, OCT (right panel) from a 4-year-old boy with Coats' disease who developed fibrotic nodules over time. (A) At presentation, exudates and retinal detachment spare the fovea, and initial visual acuity is

20/32. OCT of the macula demonstrates the presence of exudates (yellow arrow) in the inner plexiform layer, inner nuclear layer, outer plexiform layer, outer nuclear layer and subretinal space. (B) Patient undergoes laser photocoagulation, intravitreal anti-vascular endothelial growth factor and posterior subtenon kenalog injections but on follow-up one month after treatment, the extent of exudation and retinal detachment has increased and now involves the fovea. On OCT, intraretinal exudates (yellow arrow), subretinal exudates (yellow arrowhead) and subretinal fluid (blue arrowhead) are observed. (C) The patient receives two more sessions of laser photocoagulation and one further session of intravitreal anti-vascular endothelial growth factor injection and on follow-up four months after the most recent treatment, the exudates have improved dramatically and the retinal detachment has resolved. However, several fibrotic nodules have formed. Macular OCT demonstrates the presence of a fibrotic nodule (red arrows) just inferior to the fovea with surrounding cystoid spaces in the inner and outer nuclear layers (blue arrows). (D) On the most recent follow-up (fourteen months after presentation), the exudates continue to improve while the fibrotic nodules persist. OCT shows the persistent nodule (red arrows) and intraretinal cystoid spaces (blue arrows). Final visual acuity is 20/400. *The horizontal white dotted lines on the photographs correspond to the OCT line scans.*