Supplement

Supplementary Table 1. Retinal specialist versus artificial intelligence-based detection of retinal fluid (intraretinal and/or subretinal): Cirrus versus Spectralis optical coherence tomography scans.

	Investigators		Notal OCT Analyzer	
CIRRUS (n=364)				
	Estimate	95% CI	Estimate	95% CI
Accuracy	0.799	0.755-0.839	0.874	0.835-0.906
Sensitivity	0.448	0.356-0.543	0.845	0.766-0.905
Specificity	0.964	0.932-0.983	0.887	0.841-0.924
Precision	0.852	0.747-0.919	0.778	0.710-0.833
F1-score	0.588	-	0.810	-
SPECTRALIS (n=763)				
Accuracy	0.807	0.778-0.835	0.840	0.812-0.865
Sensitivity	0.476	0.414-0.540	0.811	0.757-0.857
Specificity	0.972	0.954-0.985	0.855	0.821-0.884
Precision	0.896	0.835-0.936	0.736	0.691-0.776
F1-score	0.622	-	0.772	-

Abbreviations: CI=confidence interval; OCT=optical coherence tomography

Sensitivity analyses

We performed additional analyses in order to explore whether the lower accuracy of the investigators might have arisen from partially differing interpretations of the terms intraretinal fluid and subretinal fluid. For example, some investigators might have recorded a positive fluid grade from spectral domain-optical coherence tomography (SD-OCT) only when they were confident that any hyporeflective areas observed were caused directly by exudation from active neovascular AMD (as opposed to other pathology such as degenerative cysts from emerging atrophy). We therefore reanalyzed the data while limiting the dataset to the subset of 511 eyes with neovascular age-related macular degeneration (AMD), as shown in Supplementary Table 2.

Supplementary Table 2. Retinal specialist versus artificial intelligence-based detection of retinal fluid (intraretinal and/or subretinal) in the subset of eyes with neovascular age-related macular degeneration (n=511).

	Investigators		Notal OCT Analyzer	
	Estimate	95% CI	Estimate	95% CI
Accuracy	0.708	0.667-0.748	0.840	0.805-0.870
Sensitivity	0.541	0.481-0.600	0.855	0.809-0.894
Specificity	0.917	0.873-0.949	0.820	0.764-0.868
Precision	0.890	0.833-0.932	0.855	0.809-0.894
F1-score	0.673	-	0.855	-

Abbreviations: CI=confidence interval; OCT=optical coherence tomography

Interestingly, the Notal OCT Analyzer (NOA) performance was relatively unchanged, with accuracy 0.840 (0.805-0.870), sensitivity 0.855 (0.809-0.894), and specificity 0.820 (0.764-0.868). By contrast, the investigators' performance was lower on this subset, with accuracy 0.708 (0.667-0.748), sensitivity 0.541 (0.481-0.600), and specificity 0.917 (0.873-0.949). Hence, the extent of the superior performance of the NOA was amplified in the subset of eyes with neovascular AMD. This suggests that the superior performance was not caused by partially differing interpretations of retinal fluid.

We also performed sensitivity analyses where we repeated the analyses using an expanded dataset that included eyes with a reading center grade of questionable for retinal fluid (n=1,243 eyes instead of n=1,127); absent and questionable were treated as negative cases, and definite was treated as positive. The results were very similar to those of the original analyses. In the identification of retinal fluid presence, for the investigators, accuracy was 0.817 (0.795-0.839), sensitivity 0.468 (0.416-0.520), and specificity 0.966 (0.951-0.977). For the NOA, accuracy was 0.842 (0.820-0.861), sensitivity 0.822 (0.779-0.859), and specificity 0.850 (0.825-0.873).