Usability and Quality of Retinal Images Captured by a Self-Operated, Home-based Optical Coherence Tomography (OCT) System

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Purpose:
To determine identification rates of retinal fluid of the Notal Vision Home Optical Coherence Tomography (OCT) device (NVHO) when used by people with age-related macular degeneration (AMD).

Methods:
Prospective, cross-sectional study where patients underwent commercial OCT imaging followed by self-imaging with the NVHO in clinic setting. Outcomes included patients’ ability to self-acquire analyzable OCT images with the NVHO and to compare those with commercial images.

Results:
Analyzable images were acquired by the NVHO in 538/605 eyes (88.9%) of 309/335 subjects (92.2%). Higher rates of successful imaging were found in eyes with VA ≥ 20/320. Positive percent agreement/negative percent agreement for detecting the presence of subretinal and/or intraretinal fluid when reviewing for fluid in three repeated volume scans were 97%/95%, respectively for the NVHO.

Conclusions:
Self-testing with the NVHO can produce high quality images suitable for fluid identification by human graders.