Real-World Performance of a Self-Operated Home Monitoring System for Early Detection of Choroidal Neovascularization (CNV) in AMD

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Purpose:
Evaluation of real-world (RW) performance of a monitoring strategy with a home monitoring system (FDA approved) with of standard care, for early detection of CNV in AMD, compared to the NEI sponsored HOME study and the AAO IRIS Registry results.

Methods:
A retrospective review of dry AMD patients participating in the ForeseeHome (FSH) monitoring program was performed by an Independent Diagnostic Testing Facility (Notal Vision Diagnostics Center) from 2009 - 2018. Subjects with documented development of CNV were identified. Data related to the CNV event were collected, including modality of CNV diagnosis (device alert vs other standard care means), and Snellen visual acuity (VA) at baseline and at CNV event. Performance was compared to the HOME study & AAO IRIS registry.

Results:
In these FSH-monitored patients, 306 new CNV events were recorded; 211(69%) detected after FSH alert. For eyes with known VA, baseline VA (median) was 20/25, and at event 20/32. For eyes with events detected with FSH, baseline VA was 20/32 and at event 20/32. VA loss was 2 letters when detected after FSH alert and 5 letters loss when were detected by other means (i.e. symptoms/ routine office visits). % of eyes with baseline VA>=20/40 retaining >=20/40 vision at event was 78%, 79% for eyes detected with FSH, and 77% detected by other means. These data are comparable to the device arm of the HOME study, where 64% of CNV events were detected after FSH alert, baseline VA 20/25, event VA 20/32, median VA loss of 3 letters and 91% of eyes maintaining VA>=20/40. These data are substantially better than real-word IRIS registry data where VA at CNV event was 20/83 with only 33% of eyes maintaining VA>=20/40.

Conclusions:
Real world performance of a dry AMD management strategy including the FSH Monitoring System is comparable to its performance in the NEI sponsored HOME study. FSH monitoring with standard of care in a real world setting demonstrated a substantial benefit to patients by preserving an additional 3 lines of vision at the onset of CNV, as compared to standard-of-care alone in real-world AAO IRIS data.