

A study on the relationship between the Visual Function Index score and visual acuity of patients with Wet AMD before and after anti-VEGF treatment.



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Introduction

- Age-related macular degeneration (AMD) causes progressive visual impairment in older adults
- **Anti-VEGF therapies** have transformed wet AMD management
- Visual acuity (VA) does not fully reflect AMD’s effect on the patient’s day to day activities
- The **VF-14 questionnaire** assesses real world visual function
- Auditing their reliability ensures accurate measurement of treatment outcomes and improves patient care.

Methods

- VA measured (logMAR) pre-treatment and at 6 months
- Functional vision assessed with the **VF-14**
 - 18 items across 14 daily activity domains
- Driving cessation evaluated separately, including **timing and cause**
- **VF-14 score** calculated and correlated with % VA change using **Spearman’s rank correlation coefficient**

Results

- Initial cohort **50 patients**
 - **3 excluded** (2 not given questionnaire, 1 lost)
 - Final: **47 patients** (27F, 20M), mean age **85.8 years**.
- Across 6 months:
 - Mean VF-14 score improved from **79.8 → 82.7**
 - Mean VA improved by **0.190 logMAR** (~34% improvement)
- Spearman’s correlation showed a significant positive association (**p = 0.321, p = 0.028**).

VF-14 score (0-100)	pre-treatment	79.8
	post-treatment	82.7
Visual Acuity (logMAR)	pre-treatment	0.558
	post-treatment	0.368

Figure 1: VF-14 scores and Visual Acuity pre- and post treatment

Discussion

- **Greater VA improvement correlated with greater functional vision (VF-14) gains.**
- VF-14 is a useful adjunct in assessing outcomes of anti-VEGF therapy
- VA alone is insufficient - moderate correlation indicates functional gains do not always parallel VA changes.
- **Interocular compensation** may blunt perceived functional improvement despite treated eye gains.
- Limitations of VF-14 in AMD:
 - Designed for cataracts
 - May miss central vision specific deficits
- Recommendations:
 - Include central vision specific tasks
 - Compare monocular and binocular function