

## PURPOSE

### Background

Some patients with neovascular age related macular degeneration (nAMD) become non-respondent to the first given anti-vascular endothelial growth factor (VEGF) drug. Non-responders to ranibizumab who are switched over to aflibercept treatment have a reported stabilization of the visual function and an improvement of the anatomic function.

### Objective

-To investigate the development over time of **best corrected visual acuity (BCVA)**, **near visual acuity (VA)** and **central retinal thickness (CRT)** after switching to aflibercept in cases of ranibizumab resistant nAMD.

-To present an analysis of which factors may affect the treatment outcomes at 12 months after switching to aflibercept.

## METHODS

### Population

Data from 35 eyes treated for nAMD in Gävleborg region, Sweden, was collected from the Swedish Macula Register.

Protocol: The patients, diagnosed between 2012 and 2015, switched to aflibercept due to resistance to ranibizumab and followed a Pro Re Nata regimen. Near VA was measured using a Jaeger/LIX adult A chart (Ortho-KM, Lund, Sweden) at 33 centimetres. The LIX-chart is a standardized readability index for measuring near vision and it is used almost ubiquitously in eye clinics in Sweden. For near VA, the lowest point "4" indicates the smallest size of letters of a standardized text whereas the highest point "24" indicates the largest size of letters that a patient may read.

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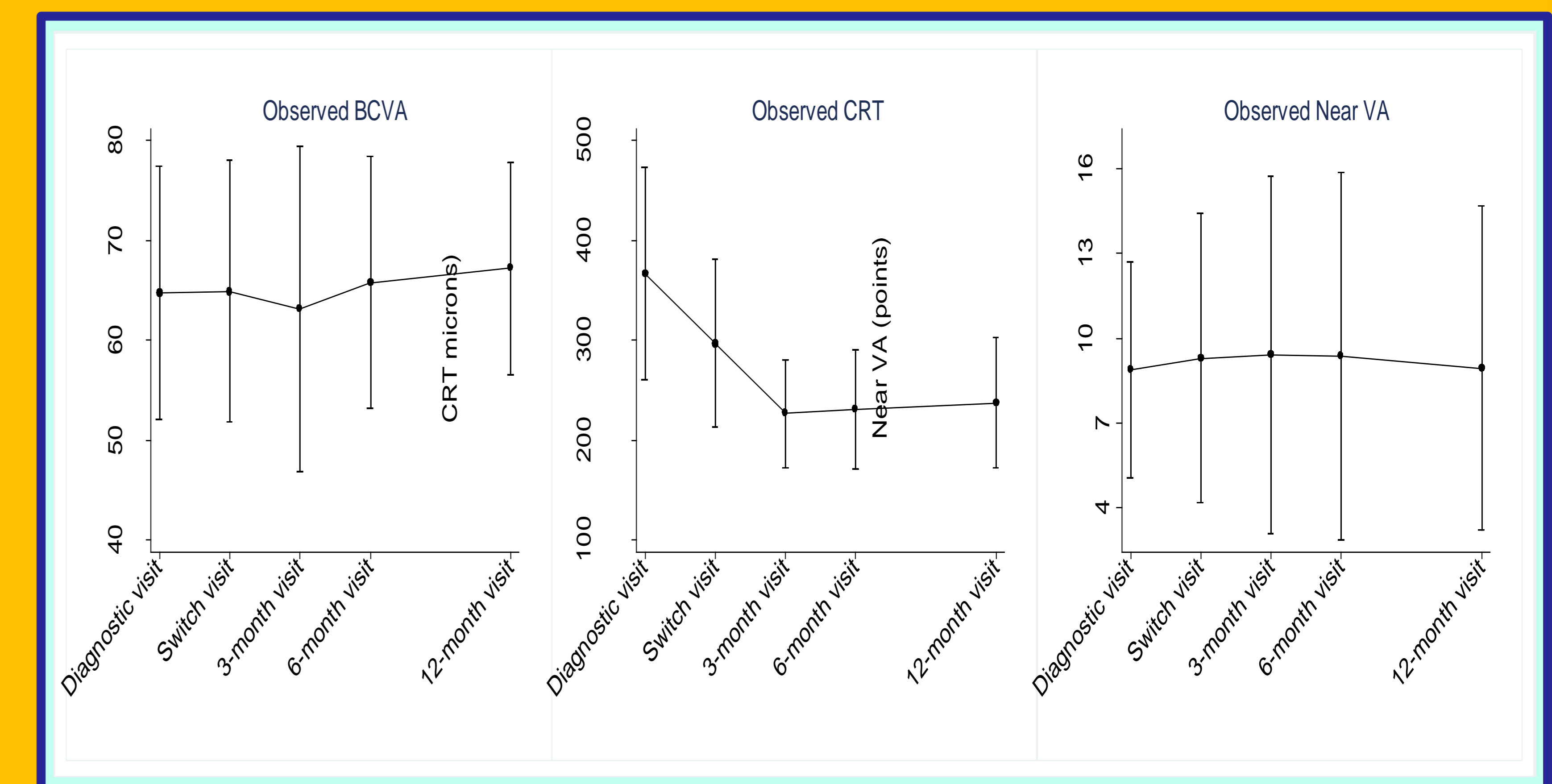


Left Column: OCT images of macula at visit of switch from ranibizumab to aflibercept.

Right Column: OCT Images 12 months after visit.

## RESULTS

At switch visit, BCVA, near VA, and CRT were 64.9 letters, 9.3 points, and 297  $\mu\text{m}$ , respectively. The average change in VA and CRT after 12-month follow up was -0.3 letters (95 % CI -3.7 letters; 3.1 letters, p-value= 0.863), 0.3 points (95 % CI -2.0 points; 2.5 points, p-value= 0.816) and -59.1  $\mu\text{m}$  (95 % CI -106.7  $\mu\text{m}$ ; -11.5  $\mu\text{m}$ , p-value = 0.018), respectively. Visual acuity and CRT at diagnosis and time from switch were the only statistical significant predictors.



Visual acuity (BCVA and near VA) and central retinal thickness (CRT) for different time points during treatment.

## DISCUSSION

Our findings show that a switch of treatment leads to a decrease in central retinal thickness and stabilization of the visual acuity over a 12-month follow up period.

We also investigated how the near visual acuity develops after switching to aflibercept. Near vision is an important parameter for the quality of life in adults independent of distance vision but it is rarely reported in the literature. Our results show that near vision stabilizes after switching to aflibercept. The ordinary print size of a newspaper is 9 to 11 points, and the eyes that completed 12-month treatment in our study had, on average, a near vision score of 9.0 points with standard deviation 5.7 points, indicating that many of our patients are able to read newspapers.

Patients respond very differently to treatment and therefore further studies on which patients groups benefit most for switching therapy are required.