Purpose: This analysis investigated the relationship between central retinal thickness (CRT) reduction and best-corrected visual acuity (VA) gain in patients who completed the 12-month EXCITE study.

Methods: CRT and VA data from all patients (n=275) or a subgroup with baseline CRT ≥275μm (n=179) treated with ranibizumab 0.3mg monthly/0.3 or 0.5mg quarterly were used. The relationship between CRT and VA at Month(M) 12, or VA gain between baseline and M12, or CRT and VA changes between baseline and M12 was described using a linear regression model and also analyzed on patients divided into five 50μm CRT strata at M12.

Results: No relationship between CRT and VA, or VA gain at M12, or change in CRT and VA between baseline and M12 (R² 0.05) was observed. Further stratified analysis showed that CRT at M12 and improvement in CRT between baseline and M12 were inversely proportional (from a median reduction of 127μm [CRT≤150μm] to a 32μm increase [CRT≥300μm]). The CRT200≤250μm stratum had the highest VA gain from baseline to M12 compared with the CRT≤150μm and CRT≥300μm strata (median of 8 vs 6 and 3 ETDRS letters, respectively). Similar effect was observed when the analysis was restricted to the baseline CRT ≥275μm subgroup. Conclusions: No linear correlation was found between VA gain and CRT at M12. Further stratified analysis indicated that CRT reduction with ranibizumab up to a threshold was associated with improved VA gain; further retinal thinning did not translate into additional VA gain.