Correlation of Best Corrected Visual Acuity and Central Subfield Thickness in Macular Edema Due to Retinal Vein Occlusion, Diabetic Retinopathy and Uveitis

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Financial Disclosures

- DG: EyePoint (C), Allergan (C)
- TC: Commercial Relationship(s);Clearside Biomedical, Inc.:Code E (Employment);Clearside Biomedical, Inc.:Code I (Personal Financial Interest)

Background

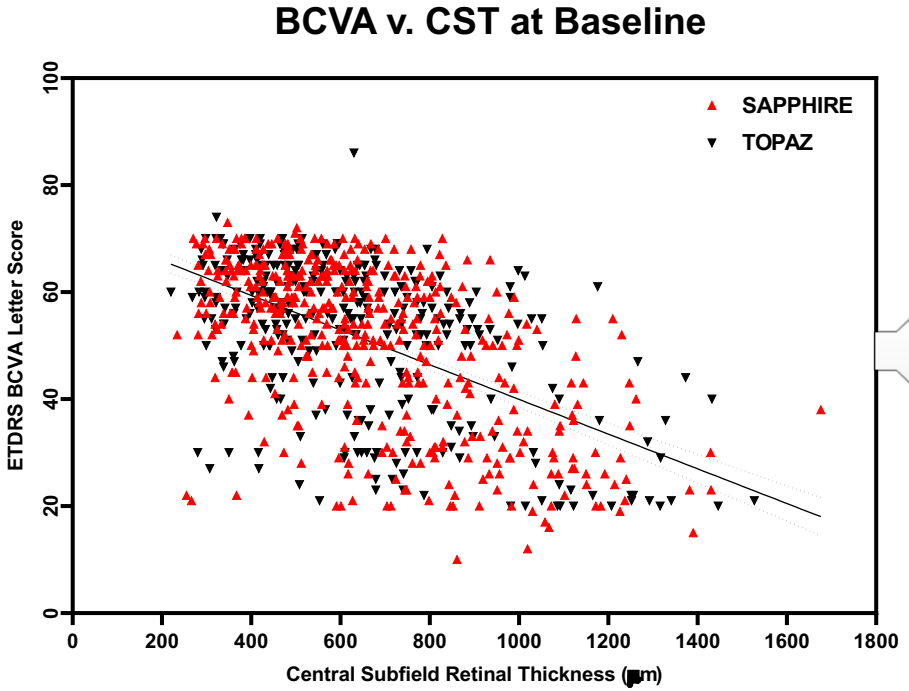
- Given the clinical importance of visual acuity and macular edema, this analysis demonstrates structure-function correlations
- In clinical practice, physicians often base treatment decisions on both BCVA and OCT assessment.
  - Over 90% of retina specialists, both in the U.S. and internationally, utilize OCT-guided variable frequency anti-vascular endothelial growth factor (VEGF) treatment protocols for nAMD.[1]

1.Stone T, *American Society of Retina Specialists Preferences and Trends Survey*. 2015.

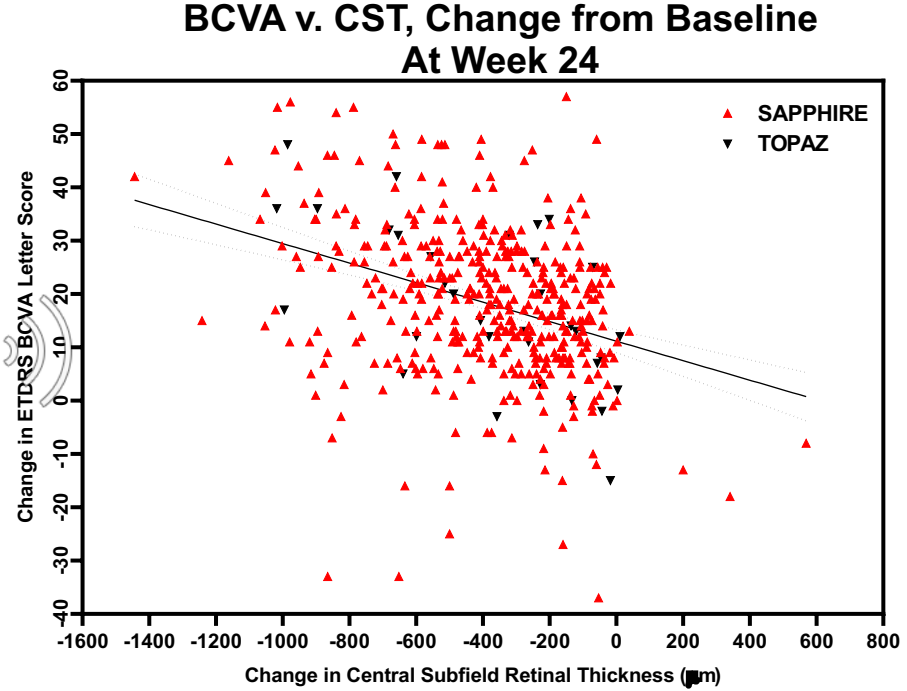
Methods

- This post hoc analysis included data with monitor-verified diagnoses per eligibility criteria, Early Treatment Diabetic Retinopathy Study (ETDRS) protocol refractions and OCT reading center evaluations
- 1063 eyes from 6 clinical trials spanning 3 disease states were included
  - NIU, RVO, and DME
- Correlations were calculated and univariate regressions were conducted to assess the relationship between BCVA and CST at baseline and changes from baseline at week 24
- Analyses were performed for pooled data and separate disorders

Moderate Relationships Between BCVA and CST in RVO

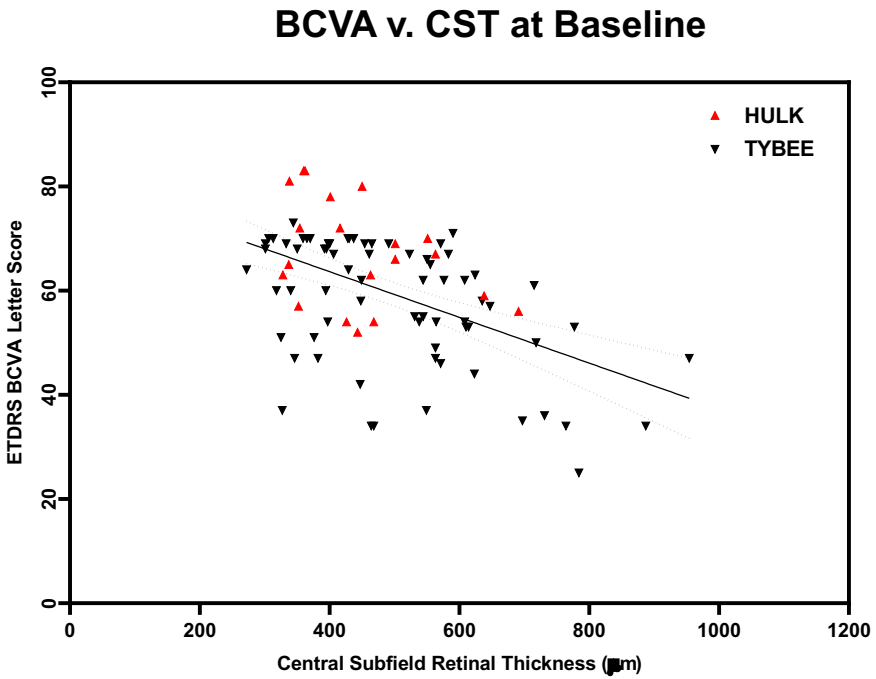


PCC: -0.56 (-0.61, -0.51; p<0.001)

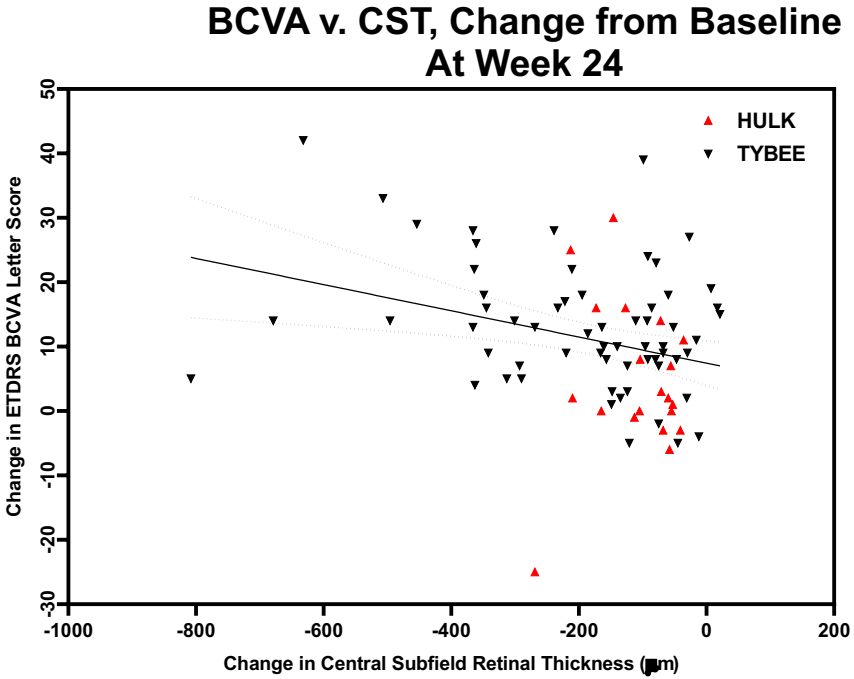


PCC: -0.35 (-0.43, -0.27; p<0.001)

Moderate Relationships Between BCVA and CST in DME

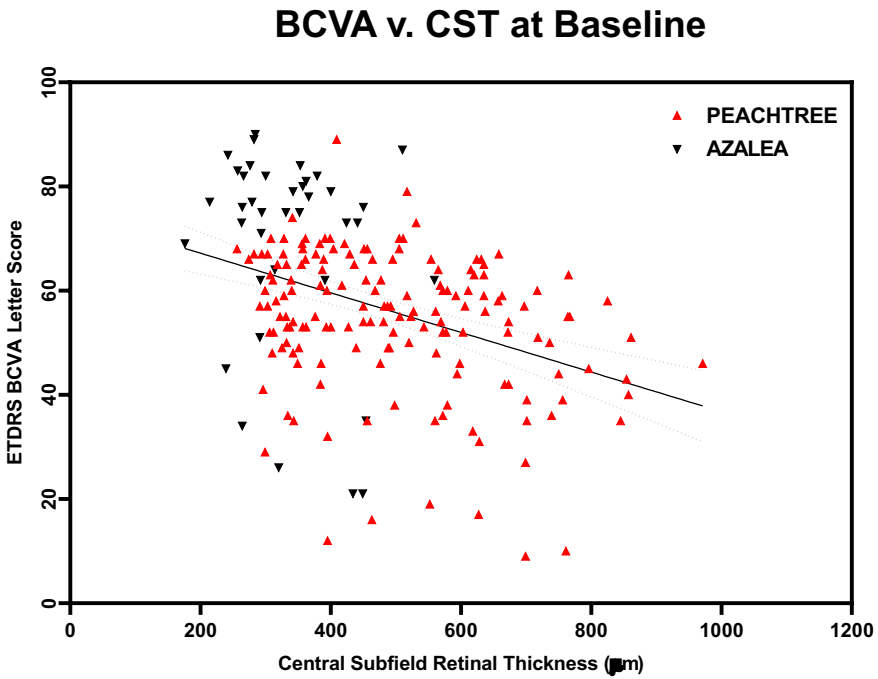


PCC: -0.50 (-0.64, -0.33; p<0.001)

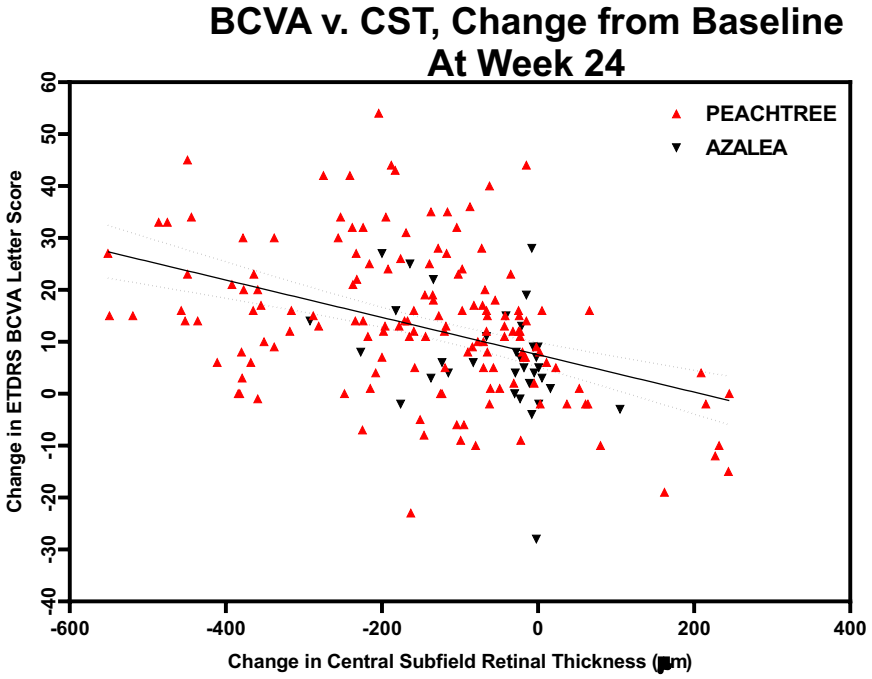


PCC: -0.30 (-0.48, -0.09; p=0.006)

Moderate Relationships Between BCVA and CST in Non-Infectious Uveitis



PCC: -0.38 (-0.49, -0.26; p<0.001)



PCC: -0.42 (-0.53, -0.29; p<0.001)

Conclusion

- There were moderate correlations between BCVA and CST in all diseases at baseline and for change at Week 24.
- These correlations provide context around the use of CST in clinical decision making and visual recovery.