

**Suprachoroidal CLS-TA Plus Aflibercept Compared with  
Aflibercept Monotherapy for DME:  
*Selected Secondary Results of the Randomized Phase 2  
TYBEE Trial***

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Study Group

The Doheny Image Reading Center  
Doheny Eye Institute  
University of California - Los Angeles

# Disclosures

- Financial Disclosures

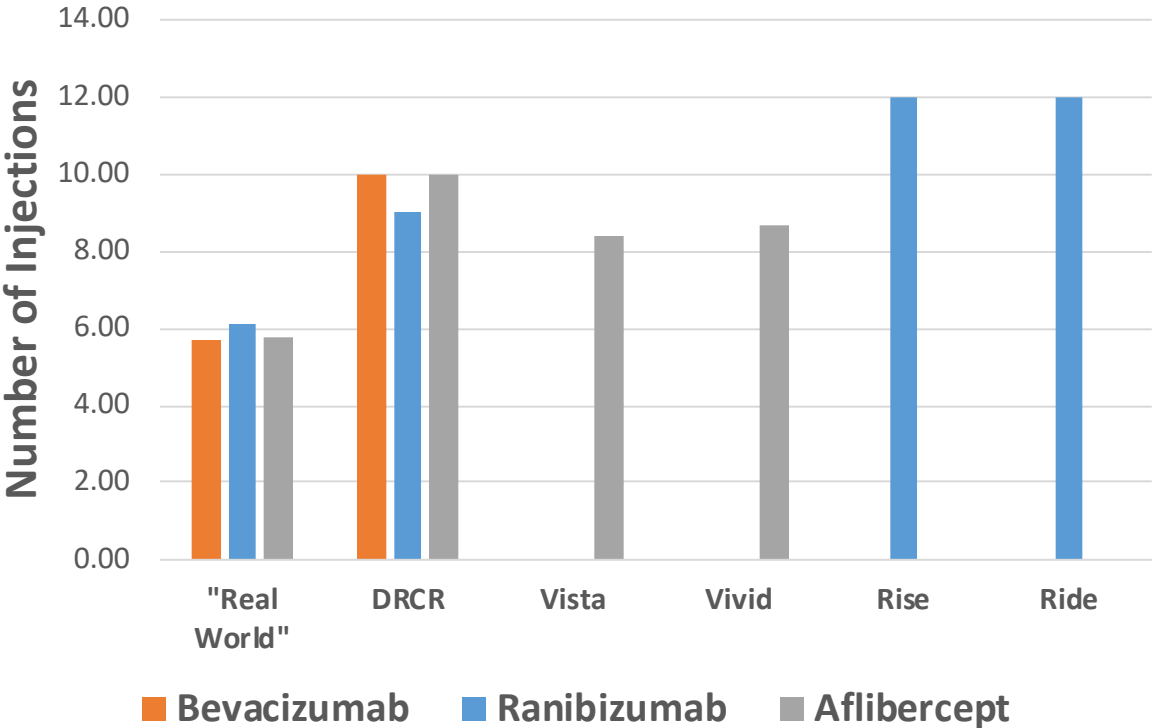
- Consultant: Boehringer Ingelheim, ThromboGenics, Genentech, Astellas, Allergan, Novartis, Alimera, Allegro

- Study Disclosures

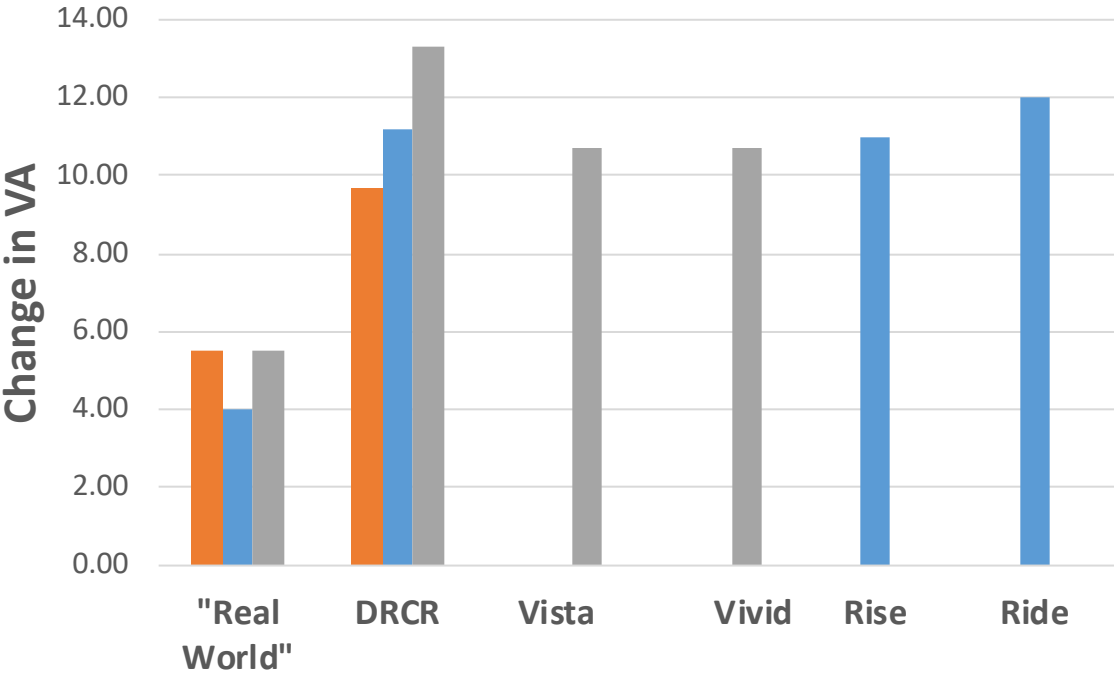
- This study includes research conducted on human subjects. Institutional Review Board approval was obtained prior to study initiation

# Undertreatment may be one reason for worse outcomes in the “real-world”

12 Month analysis: number of injections

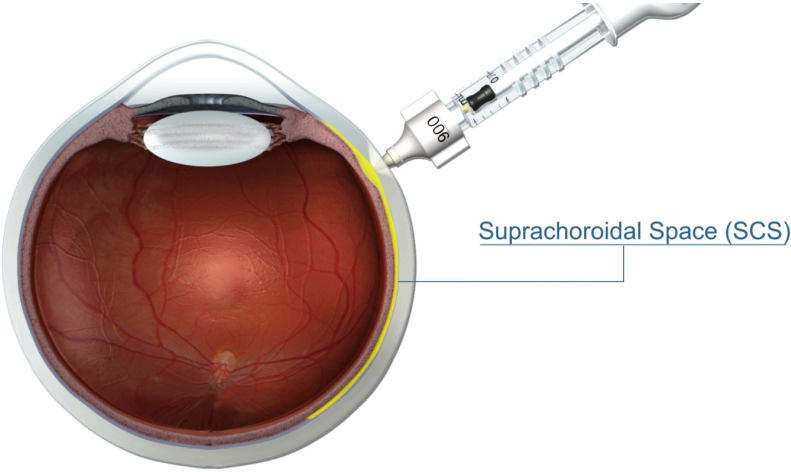


12 Month analysis: number of letters



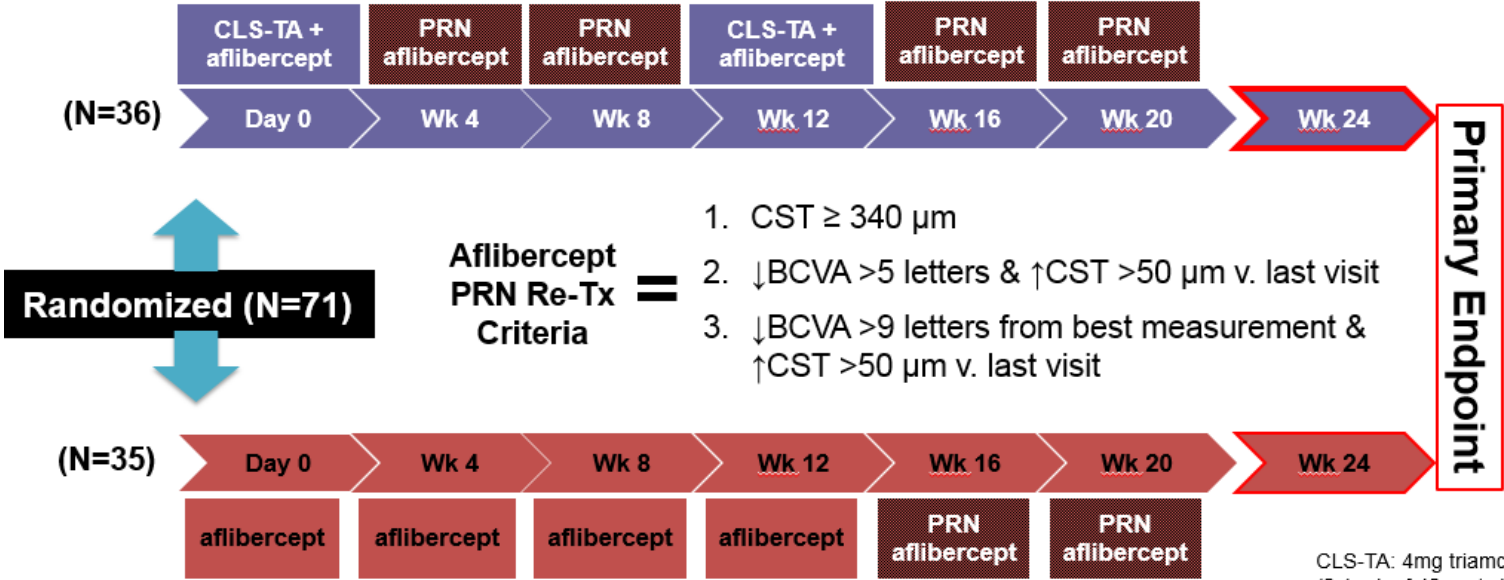
Ciulla, et al. Ophthalmology Retina 2018;2:1179-1187; Retina Society 2019

# TYBEE: Phase 2, Double-Masked, 6-Month DME Trial



Suprachoroidal Space (SCS)

Illustration of CLS-TA Suprachoroidal Delivery

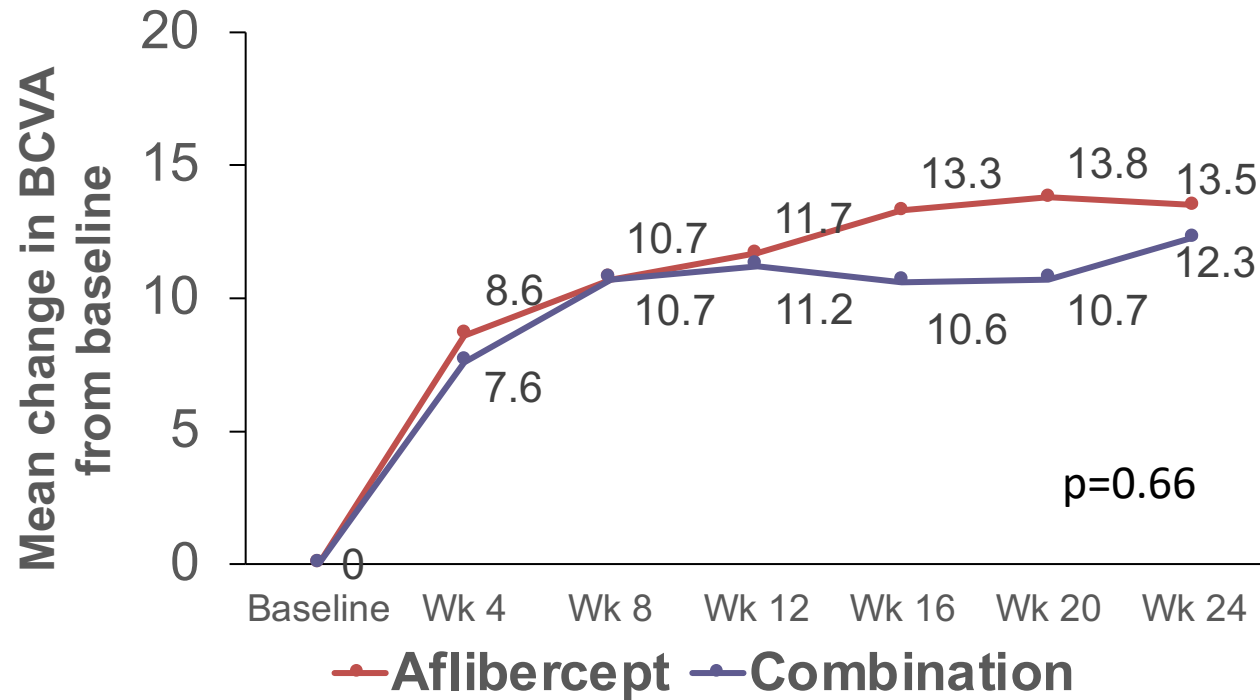


- Sham CLS-TA injections were administered to the aflibercept arm at Day 0 and Wk12.
- Sham aflibercept injections were administered to the combination arm at Wk4 and Wk8

CLS-TA: 4mg triamcinolone acetonide (0.1 mL of 40 mg/mL suspension) delivered into suprachoroidal space.  
Aflibercept: 2 mg/0.05 mL

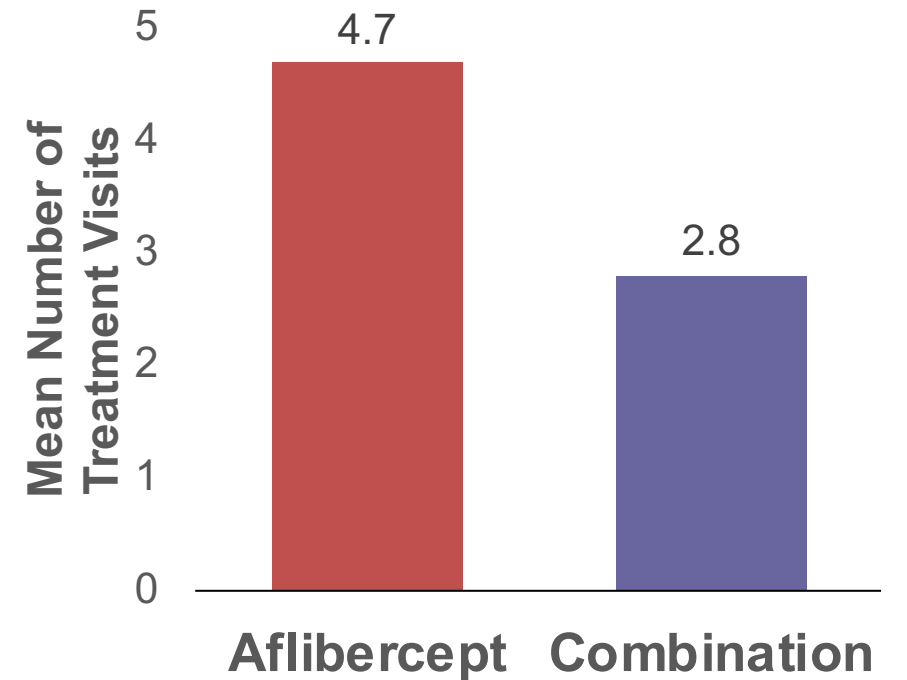
# TYBEE Endpoints

## Mean Change in BCVA



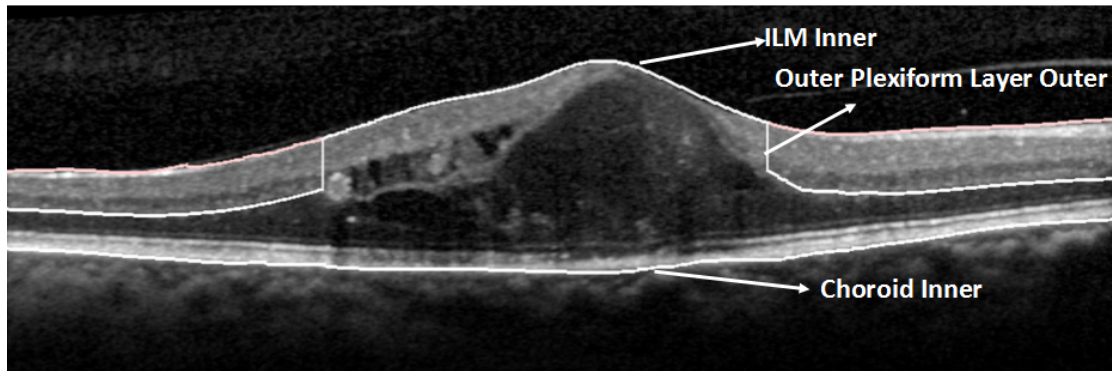
Baseline BCVA: Aflibercept: 58; Combination 56

## Number of Treatment Visits



# Analysis: Disorganization of the Inner Retinal layers (DRIL)

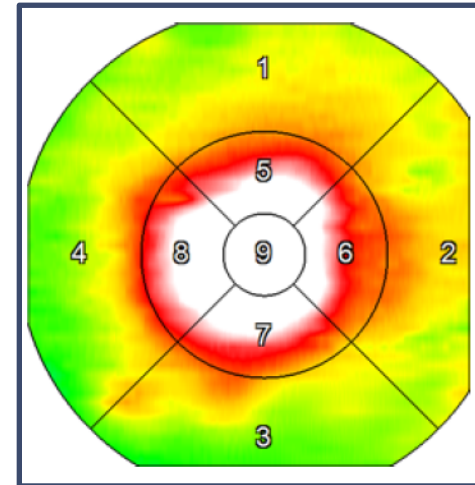
- Disorganization of the inner retinal layers was defined where 1 or more boundaries between the following layers are not separately identifiable:
  - ganglion cell layer and inner plexiform layer complex
  - inner plexiform layer complex and inner nuclear layer
  - inner nuclear layer and outer plexiform layer
- Performed area and maximum extent measurement



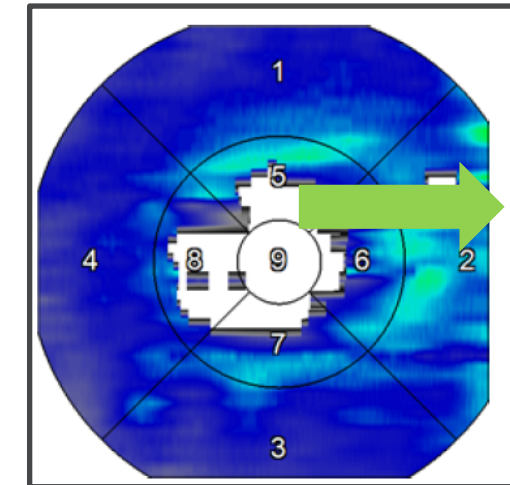
$$\text{DRIL Area} = \text{Total Retina} - \text{Inner Retina}$$

## DRIL area map from volume scans

Retinal thickness map

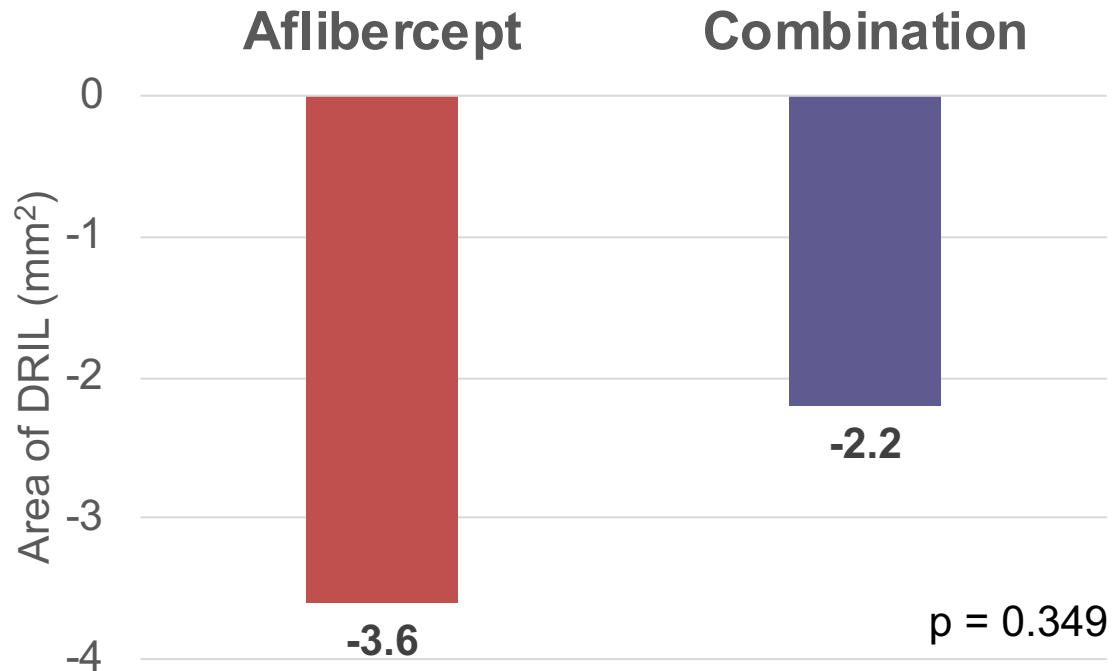


DRIL area map

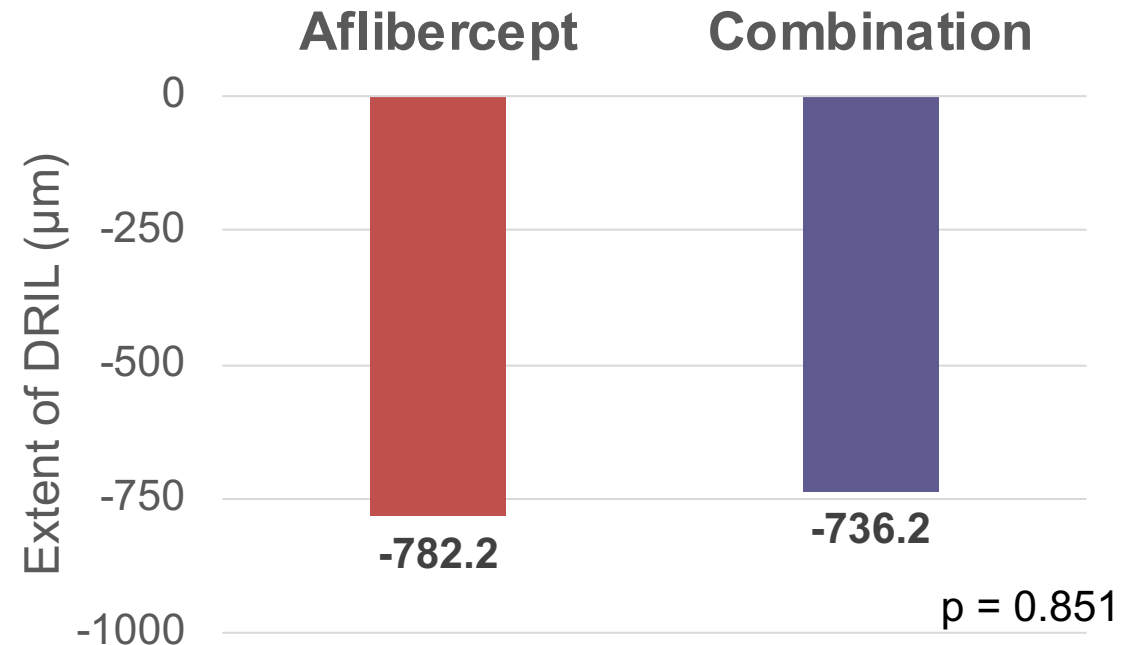


# Similar Improvement in Area and Maximum Extent of DRIL

Area of DRIL (mm<sup>2</sup>)



Maximum Extent of DRIL (μm)



# Conclusion

- Combination aflibercept & suprachoroidal CLS-TA vs aflibercept monotherapy at Wk24:
  - Similar BCVA change
  - Improved OCT CST change in the combination group
  - Similar DRSS change
  - **Similar *DRIL change (maximum extent and area)***
  - Fewer treatment visits in combination group (2.8 vs 4.7 mean treatment visits)
- DRIL is a biomarker that should be evaluated in future DME clinical trials