

# Comparison of Suprachoroidal and Intravitreal Injection Flow Mechanics Analyzed via Multimodal Imaging

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1. Clearside Biomedical, Inc.

*American Society of Retina Specialists*

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# Financial Disclosures

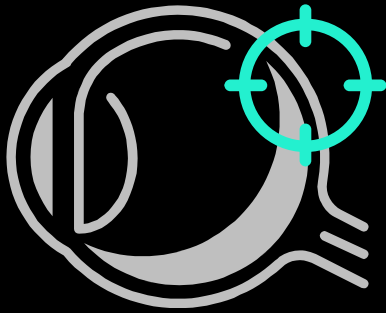
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SK: Consultant for Allergan, Clearside, Alimera, Regeneron, I CROWD

CW: Clearside Biomedical, Employment & Shareholder

TC: Clearside Biomedical, Employment & Shareholder

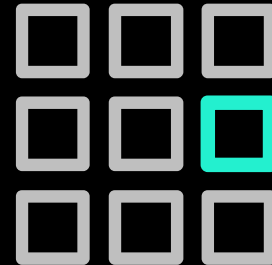
# Core Advantages of Treating via the Suprachoroidal Space



## TARGETED

The back of the eye is the location of many irreversible and debilitating visual impairments<sup>1</sup>

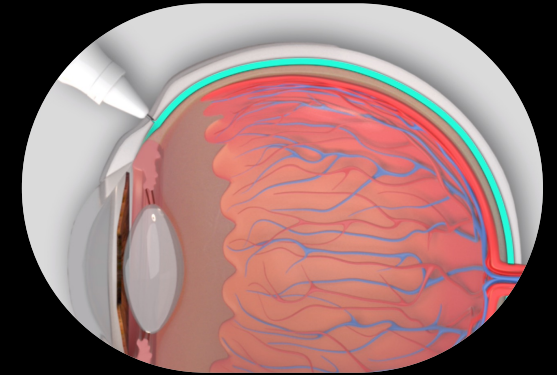
*for efficacy*



## COMPARTMENTALIZED

Drug is compartmentalized in the suprachoroidal space, which helps keep it away from non-diseased tissues<sup>2</sup>

*for safety*



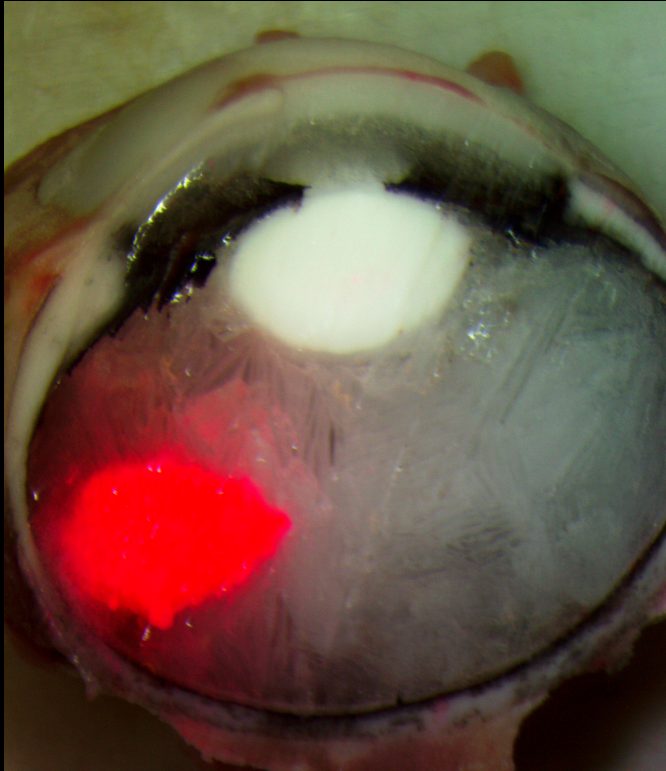
## BIOAVAILABLE

Fluid spreads circumferentially and posteriorly when injected within the suprachoroidal space, bathing the choroid and adjacent areas with drug<sup>3</sup>

*for durability*

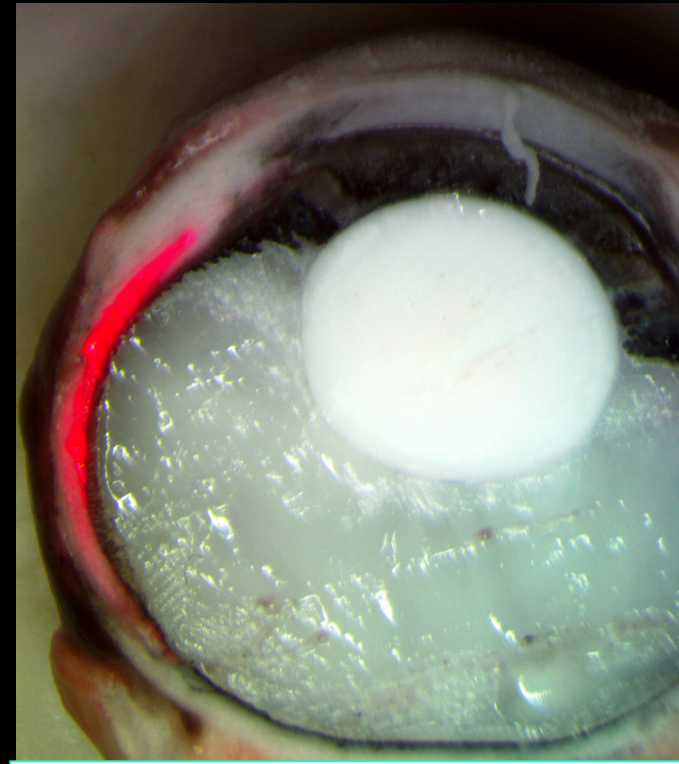
Suprachoroidal injection shows posterior and diffuse spread;  
IVT injection shows injectate bolus in vitreous

### Intravitreal Injection

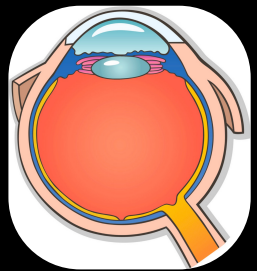


*Injectate located as a bolus  
in the vitreous*

### Suprachoroidal Injection



*Injectate spreads from scleral  
spur towards macula*



*Dye injected followed by immediate freezing, then sectioned across injection plane*

# Suprachoroidal injectate spreads immediately in circumferential and posterior directions



*Fluorescing dye Injected under UV Light, filmed in real time*

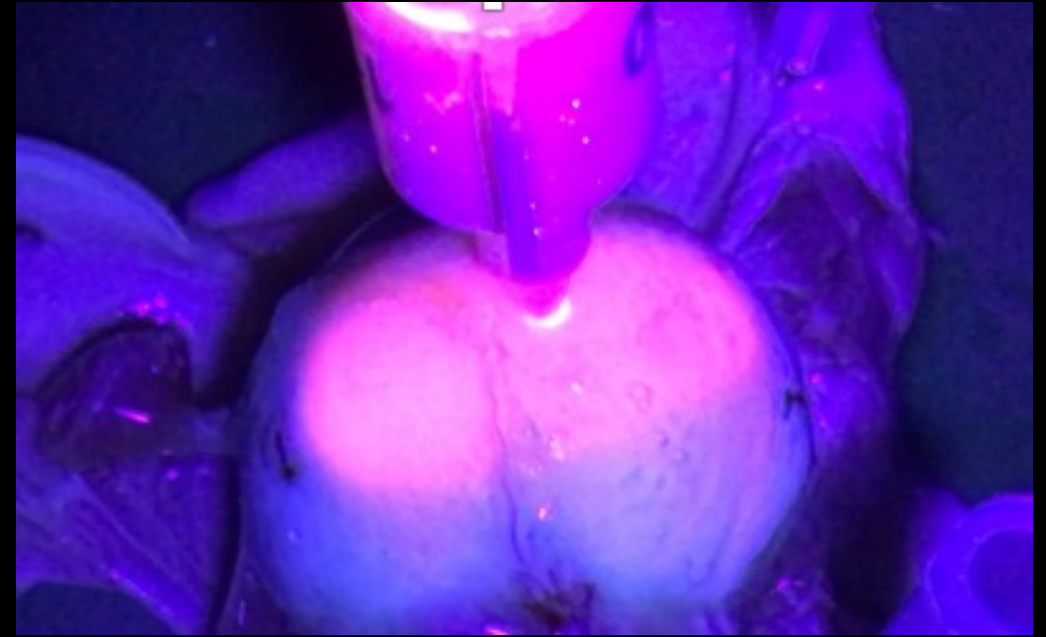
# Suprachoroidal injectate spreads immediately in circumferential and posterior directions

## Intravitreal Injection



No injectate spread visible, fluorescence is muted by the overlying pigmented choroid and retinal pigment epithelium

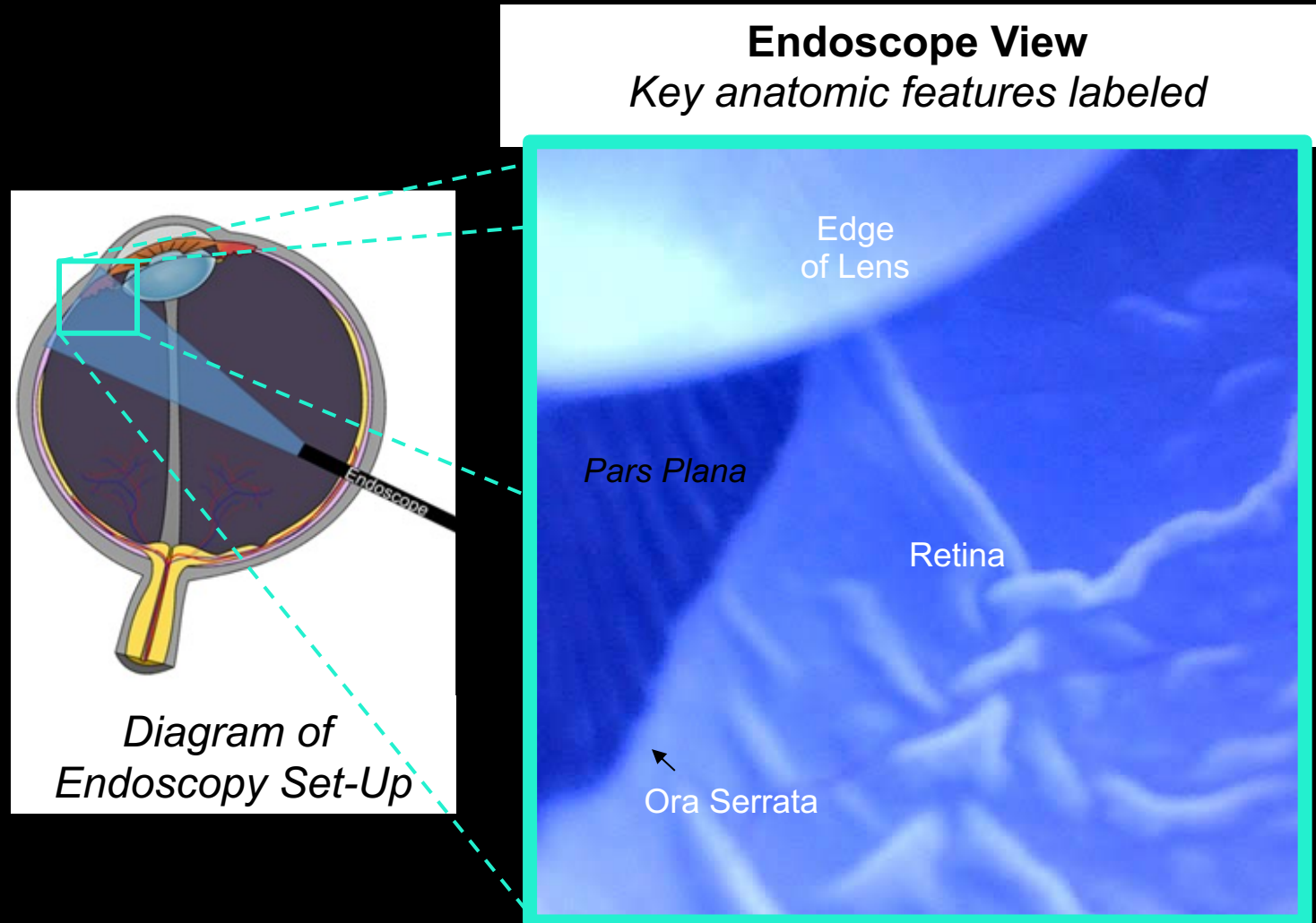
## Suprachoroidal Injection



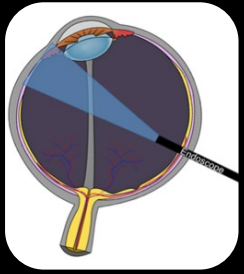
Fluorescing particles spread immediately around the globe circumferentially and posteriorly



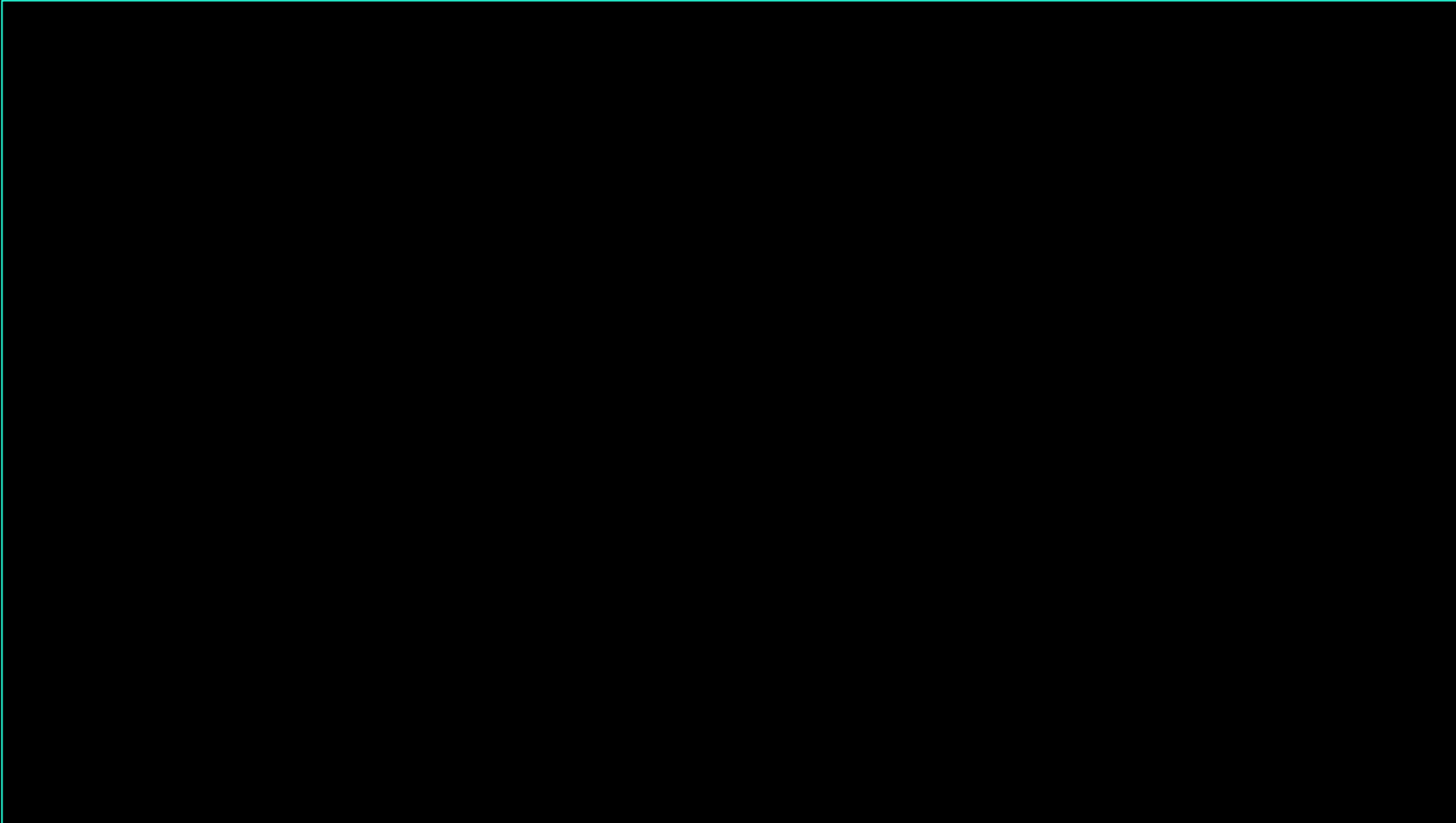
# Endoscopic video of suprachoroidal and IVT injection to visualize injection internally



Suprachoroidal injection shows localized tissue depression, then expansion with no needle penetration through choroid & retina



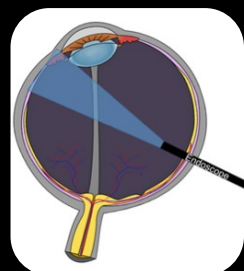
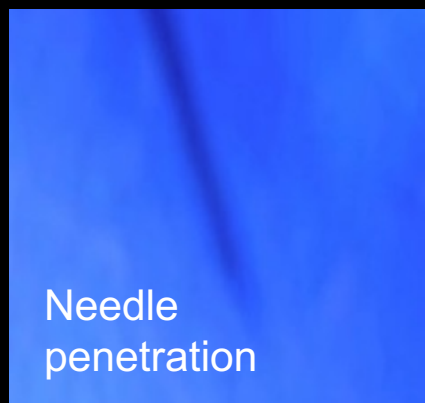
*For Reference:  
Images oriented  
per cross-section  
diagram above*





Suprachoroidal injection shows localized tissue depression, then expansion with no needle penetration through choroid & retina

### IVT Injection



*For Reference:  
Images oriented  
per cross-section  
diagram above*

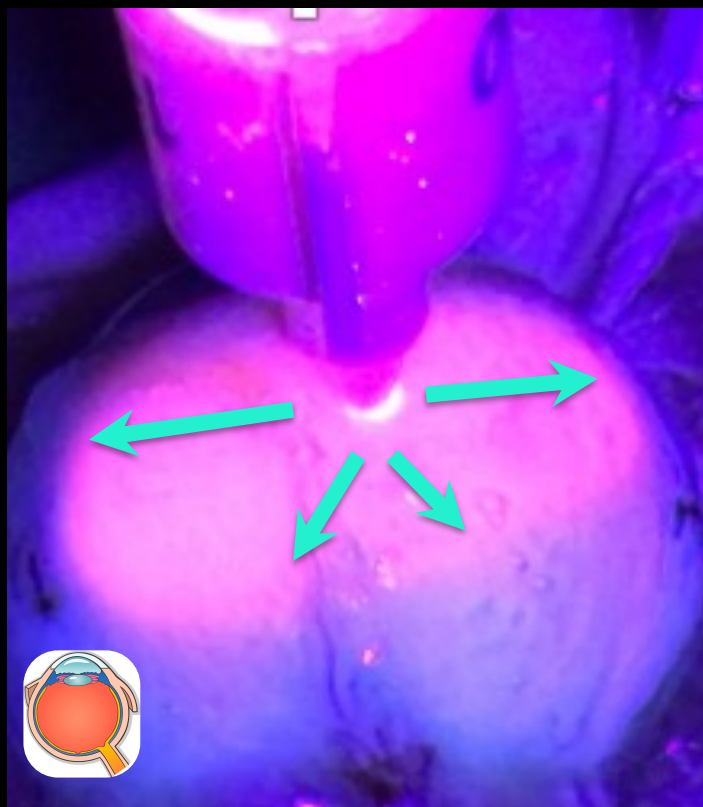
### Suprachoroidal Injection



# Core Advantages of Treating via the Suprachoroidal Space

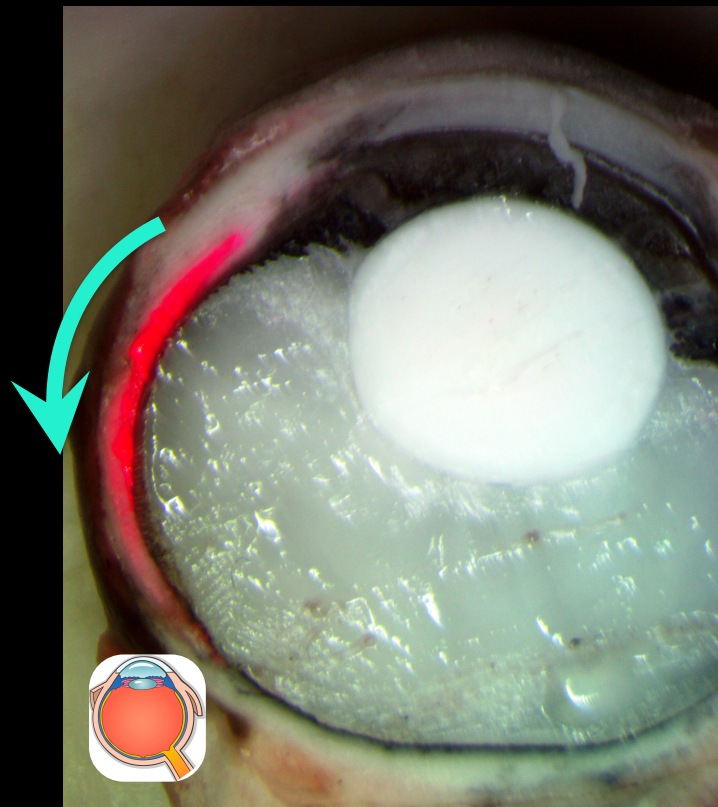
## Targeted Delivery

*Directly to posterior tissues*



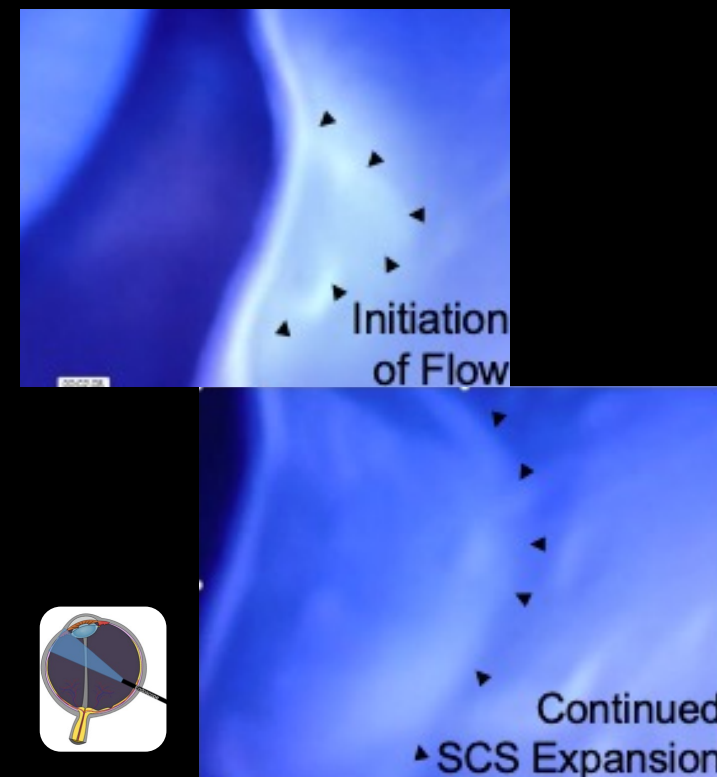
## Compartmentalized

*Away from non-diseased tissues*



## Bioavailable

*Bathing choroid & adjacent tissues*





*Footage courtesy of Dr. Allen Hu  
Cumberland Valley Retina Consultants*

# Key Takeaways

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- Imaging of suprachoroidal injections demonstrates
  - acute opening of the SCS
  - circumferential, posterior spread of injectate
  - compartmentalization of injectate to posterior tissues
- These multimodal imaging methodologies support the potential of suprachoroidal injections to target affected tissue layers in chorioretinal disorders.