

# Incidence of Endophthalmitis Following Routine or Complex Cataract Surgery in Practices With and Without Access to Hydrogel Sealant: Retrospective Study Using the IRIS Registry

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# Disclosures

- This study was funded by Ocular Therapeutix
- **MH Goldstein, JL Metzinger, S Vantipalli,** and **N Oliynyk** are employees of Ocular Therapeutix, Inc.
- **H Fevrier** is an employee of Verena Health
- **AA Moshfeghi**
  - Ocular Therapeutix – consultant, personal financial interest
  - Allergan – consultant
  - Allegro – consultant, financial support
  - Genentech – consultant, financial support
  - Graybug – consultant
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# Endophthalmitis Following Cataract Surgery

**Endophthalmitis after cataract surgery is a rare but vision-threatening event with an incidence of ~0.5 to 2.15 per 1,000 surgeries.<sup>1,2</sup>**

- Necessitates a large sample size to conduct meaningful studies

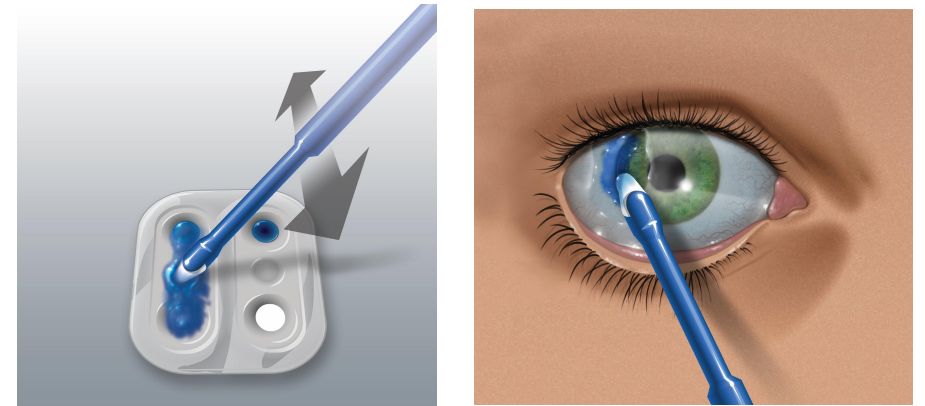
## **IRIS<sup>®</sup> (Intelligent Research In Sight) Registry<sup>3</sup>**

- Clinical registry with aggregated real-world data from nearly 60 million unique patients
- Approximately 16,000 ophthalmology clinicians contribute data to the registry through an electronic health record

**The IRIS Registry is an ideal database to assess rare events like endophthalmitis following cataract surgery**

## **ReSure<sup>®</sup> Sealant**

A hydrogel sealant that creates an in situ temporary, soft surface barrier to prevent wound leakage from clear corneal incisions (up to 3.5mm) after cataract surgery<sup>4</sup>



Rendering of mixing and applying ReSure Sealant

# Study Objective and Design

## Study Design

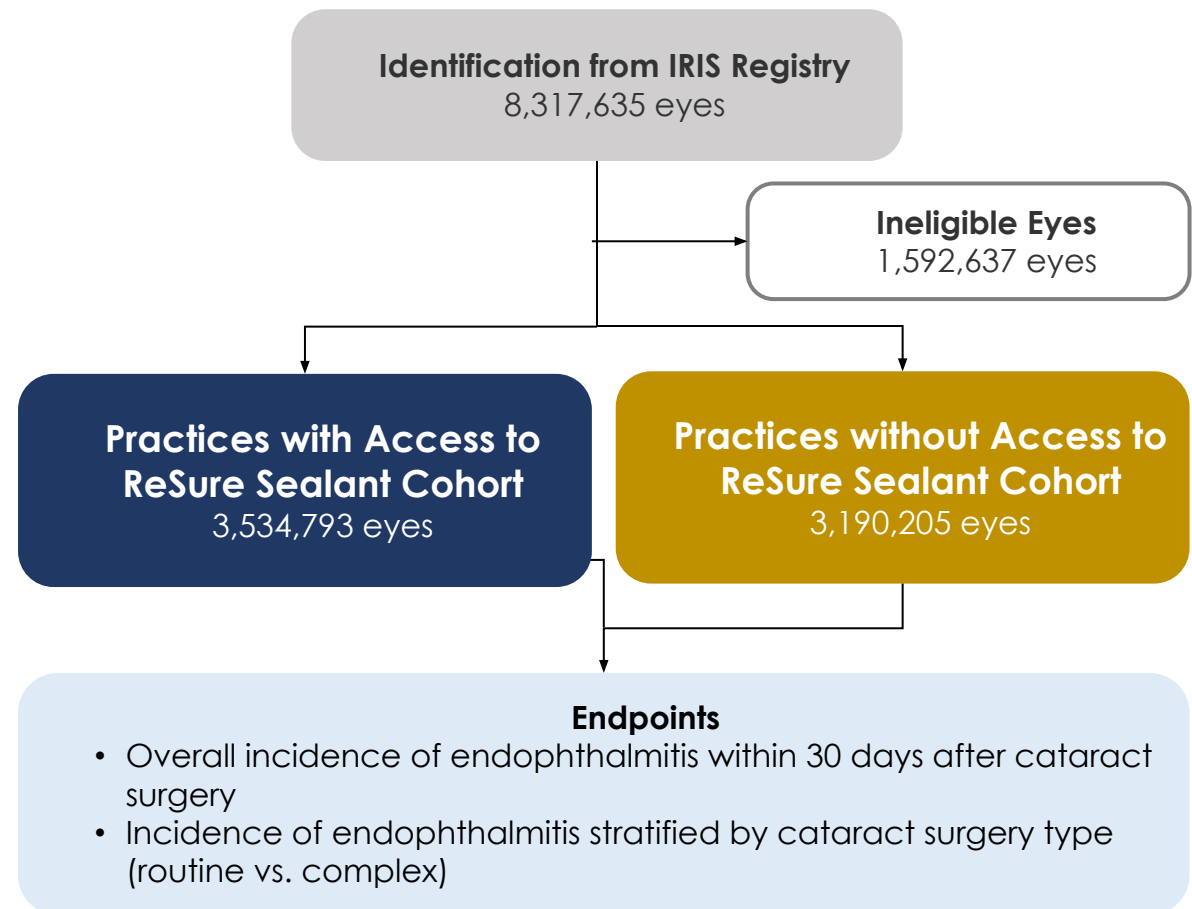
- Retrospective study
- Data from the IRIS Registry with analyses conducted by Verana Health

## Key Inclusion Criteria

- Extracapsular cataract removal with insertion of intraocular lens prosthesis between January 1, 2016 and December 1, 2019
- Patients  $\geq 22$  years old and have at least one visit within 30 days after surgery
- Practices must have provided data for at least 30 days after each surgery

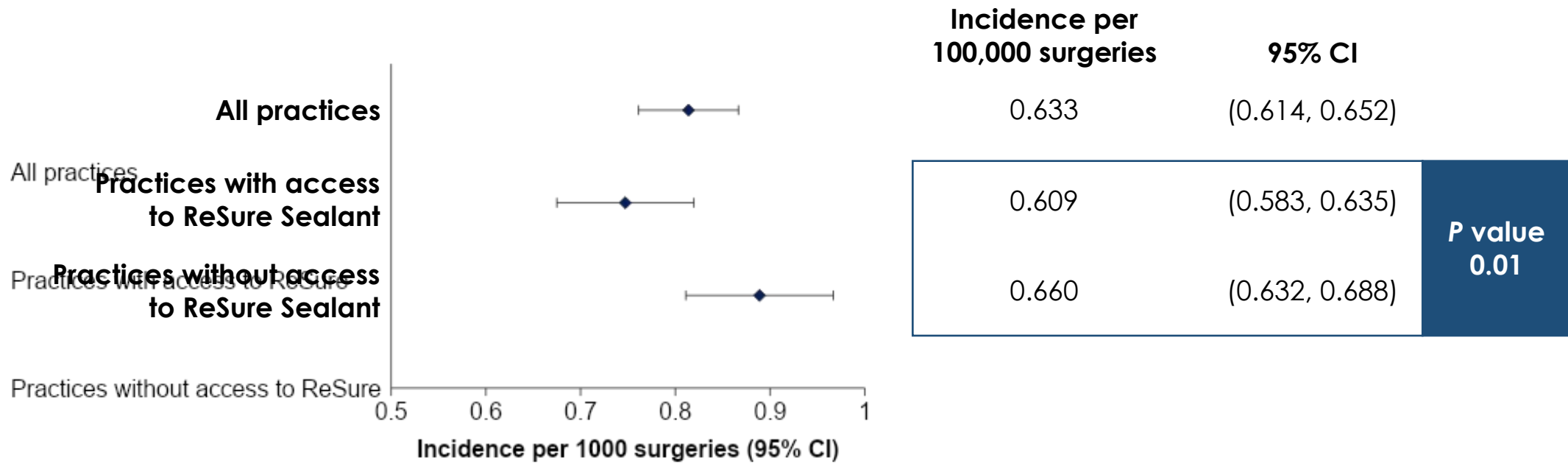
## Primary Objective

- To compare the incidence of endophthalmitis within 30 days of any cataract surgery between sites with and without access to ReSure Sealant



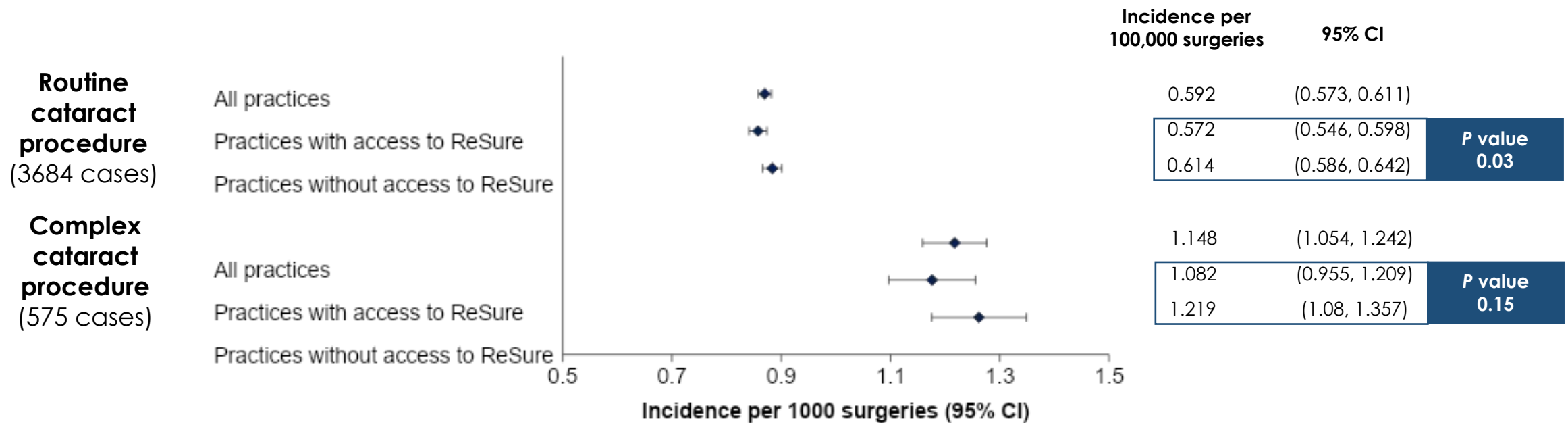
# Overall Incidence of Endophthalmitis

- A total of 4,259 cases of endophthalmitis with prespecified laterality were identified within 30 days after cataract surgery
- **No clinically significant difference** (i.e., doubling) in incidence rate of endophthalmitis was found between eyes treated at practices with and without access to ReSure Sealant



# Incidence of Endophthalmitis Stratified by Cataract Surgery Type

- The overall incidence of endophthalmitis among complex cataract procedures (3684 total cases; 87% cases) was higher than routine procedures (575 total cases; 13% cases)
- There was **no clinically significant difference** in endophthalmitis incidence between the cohort with ReSure Sealant access and cohort without ReSure Sealant access



# Conclusions

- To our knowledge, this is the **largest reported recent review** of endophthalmitis cases following cataract surgery
- Overall post-cataract surgery endophthalmitis rate in 2016 to 2019 was **low (0.633 per 1,000 cataract surgeries)**
- Patients undergoing complex cataract surgery had a higher incidence of endophthalmitis
- **Practices with access to ReSure Sealant had a significantly lower rate of endophthalmitis** than sites without access to ReSure Sealant and the difference was not clinically meaningful