Data Studio

1:00–2:30pm, Wednesday, 21 April 2021
Videoconference:
https://stanford.zoom.us/j/94176271679?pwd=UHRjdENYULI1NXZTbHJXNXWjB1UT09
Password: 423149

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Title: Clinical Differentiation of Corneal Ulcers and Scars

Summary:
The Data Studio Workshop brings together a biomedical investigator with a group of experts for an in-depth session to solicit advice about statistical and study design issues that arise while planning or conducting a research project. This week, the investigator(s) will discuss the following projects with the group.

Among corneal diseases, microbial keratitis is the most common cause of corneal blindness and one of the true ocular emergencies leading to vision loss within hours if left untreated. An approach to diagnose and guide management of corneal ulcers remotely could make a significant impact in vision outcomes, especially for patients with limited access to eye care. We aim to evaluate the diagnostic accuracy and reliability of ophthalmologists of various sub-specialties and training levels to detect the activity of corneal ulcers using slit-lamp photographs.

We have prepared an electronic survey tool containing anterior segment slit-lamp photos of corneal findings from patients with gold-standard diagnosis of microbial keratitis or corneal scar. The participants, recruited from Stanford ophthalmologists, will classify each photos into one of the following three categories: active corneal infection, scar, or unsure. We will stratify the survey results by training level and sub-specialty of the grader to determine accuracy, sensitivity, specificity, and reliability with weighted kappa statistics.

Questions:

1. Given 4 participant groups, what should be the sample size of graders for each group?

2. Any statistical consideration when it comes to the number of photographs the graders should review?

3. What is the best way to calculate the accuracy and precision of each group to distinguish between active corneal infection and scar?
Zoom Meeting Information

Join from PC, Mac, Linux, iOS or Android:
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For more information about Data Studio: