

ACT

SPRING – 2023 NEWSLETTER

The EYE ACT STUDY



The Eye ACT study is a National Institutes of Health (NIH)-funded study involving a large and impressive team with a diverse array of specialties and experience. With our University of Washington partners, we are investigating eye diseases, cognitive decline, Alzheimer's Disease, and dementia. Our goal is to better understand Alzheimer's disease and the aging brain by studying the aging eye.

So, what do we do? First, and most visible to our participants, is the collection of ophthalmic data in the KPWHRI research clinic from participants who are already enrolled in the ACT study. We have just hired our 2nd ophthalmic technician to conduct Eye ACT visits in our clinic. To date, we've collected eye images and data from almost 300 participants since December 2021. At the in-clinic visits, we check participant vision for distance and contrast sensitivity, we image eyes using 2 different machines, and we check eye pressure. Since September 2022, we have been conducting a pilot of home-based visits where we bring eye exam equipment to participant's homes.

In addition to in-person research clinic visits, we review and analyze data from ACT participants who have given us permission to view their medical records, both paper and electronic. Here at KPWHRI, we have 4 paper chart abstractors who retrieve data from paper charts that date back to 1950. We also have a team of 3 scientists developing Natural Language Processing (NLP) algorithms which use artificial intelligence to identify specific eye-related information in electronic medical records.

All ACT participants' eye disease data are being analyzed by a 3-person KPWHRI biostatistics team. They conduct analyses to provide deeper understanding of the relationships between eye diseases, dementia, and cognitive decline.

Other staff here at KPWHRI also includes a programmer who has built our database for capturing data we collect at in-person visits, a project manager who oversees the day-to-day operations of the study, and a principal investigator who oversees all the activities of the study.

Last but not least, there is a whole Eye ACT Team at the University of Washington led by Principal Investigator Dr. Cecilia Lee, which includes an impressive group of collaborators who have expertise in neuropathology, biomedical engineering, biostatistics, machine learning and more. Dr. Lee's research lab at South Lake Union specializes in projects related to computational ophthalmology, where the information collected from Eye ACT participants at Kaiser are being analyzed and interpreted.



Send comments or suggestions to:

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