



CLSA Approved Project

Applicant

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Project Title

Enhancing the CLSA platform for research on vision and eye disease through the grading of retinal images

Project Summary

We have used CLSA data to provide information on the frequency of visual impairment and eye disease and their risk factors and consequences. One unique aspect of the CLSA data that we have not yet utilized is the retinal image data. The CLSA has baseline and follow-up retinal images that remain ungraded for retinal vessel characteristics. These retinal images contain valuable information that can be used to better understand the causes or consequences of eye diseases like glaucoma, age-related macular degeneration, and cataract. For example, they can be graded for vessel width and tortuosity (i.e. twisting). We have partnered with researchers in the UK who have developed a fully automated software called QUARTZ that can be used to provide retinal vessel traits on large numbers of images. With the graded retinal images, we want to understand whether early vascular changes are involved in the development or consequences of age-related eye disease.

Keywords

Vision, eye, retinal images, cognition, stroke