

Barriers to Equitable Eyecare: Outback Australia











Hub and Spoke

- Monthly visits to 6 regional towns



Telehealth Outcomes

- Halved wait times for surgery
- 10 x increased accessibility for Aboriginal patients when on-call service introduced
- High patient satisfaction
- Systematic review showed outcomes were equal or better with TH
- Improves surgeon efficiency and reduces duplication of services e.g. no pre or post op visits



 **Lions Outback Vision**

AI Research Partners









Deep Learning to Detect OCT-derived Diabetic Macular Edema from Color Retinal Photographs

A Multicenter Validation Study

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DLS development datasets:  Thailand,  UK and  US

DLS validation datasets:  Australia,  India,  Thailand and  UK

Comparison: Human experts grading for hard exudates within 1500 microns on color fundus photographs

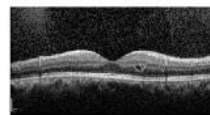
Image for DLS input and expert review:

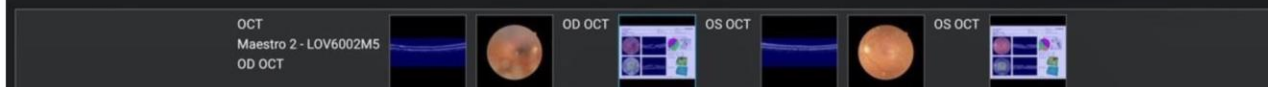
Color fundus photograph



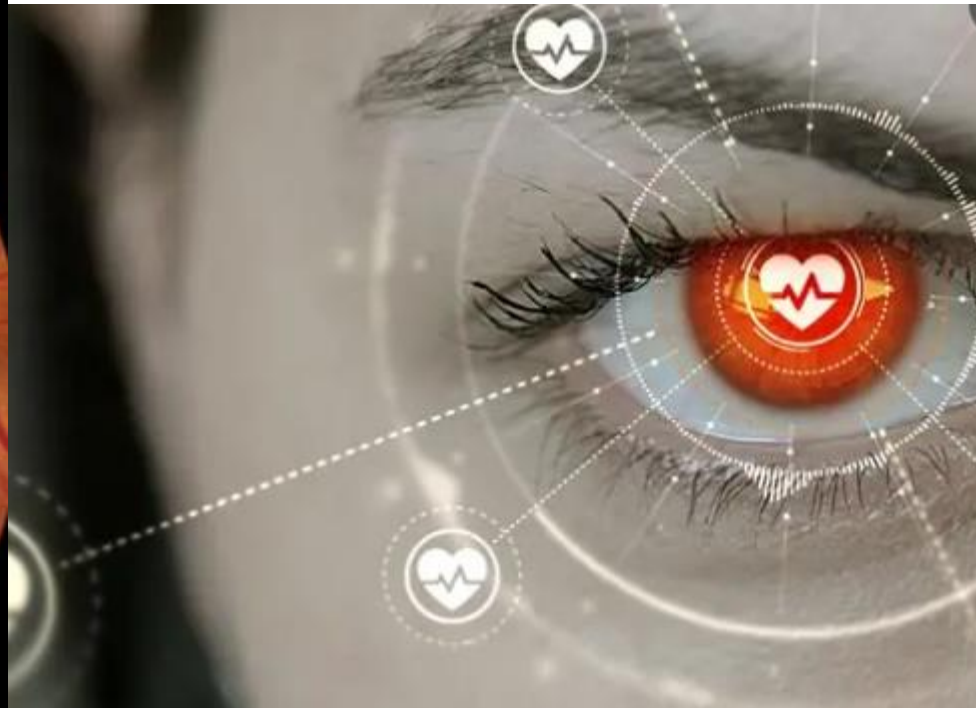
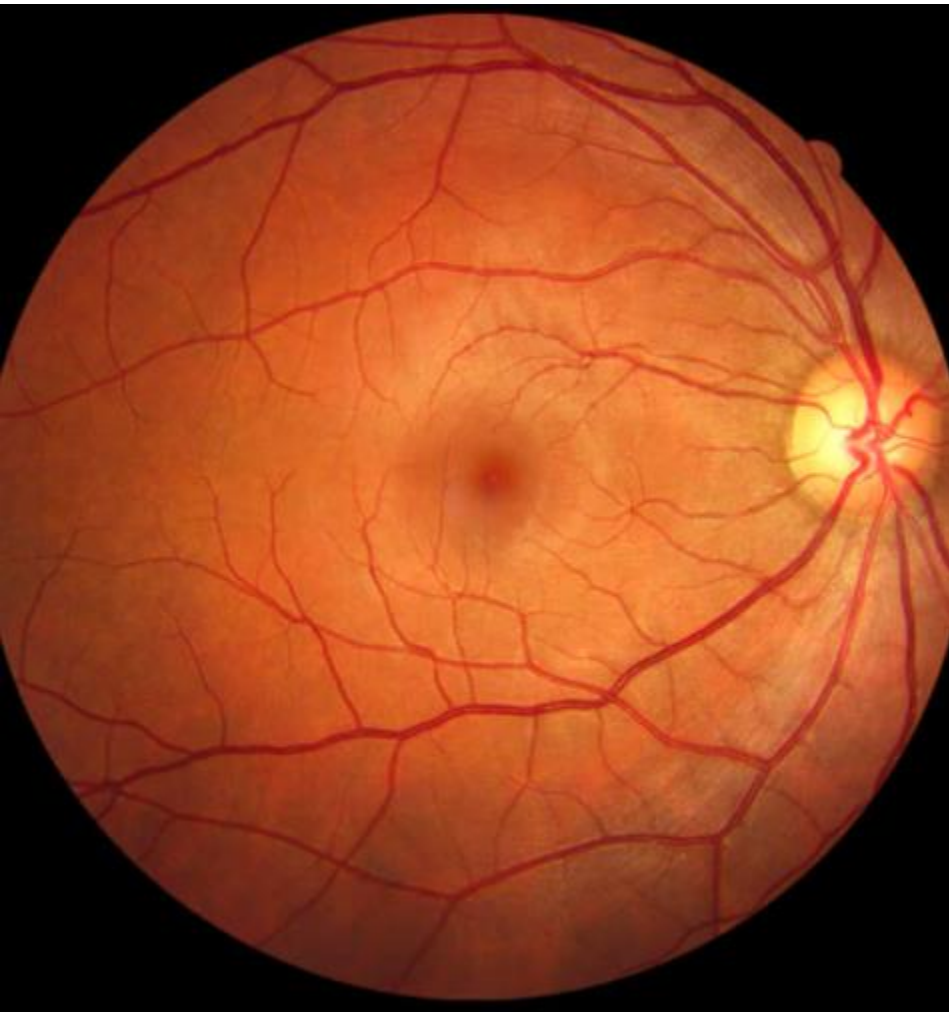
Reference standard:

CST \geq 300 microns from optical coherence tomography









the Challenge

Reimagining regional and remote health care



Lions Outback Vision NW Eye Hub

State-wide telehealth and outreach
surgery from a new Broome Base

Funding supporters:

Wen Giving/Hawaiian

Federal and State Govt.

Zeiss

Topcon

Alcon

Novartis

Fred Hollows Foundation

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