

# Methods of Remote Ophthalmic Imaging Using an OCT and *AnyDesk* Software

By

- Michael Mandel BOptom (Hons) Pre-Registration Optometrist
- Joshua Mandel BOptom (Hons) MCOptom
- Simon Rose MSc MCOptom

## Introduction:

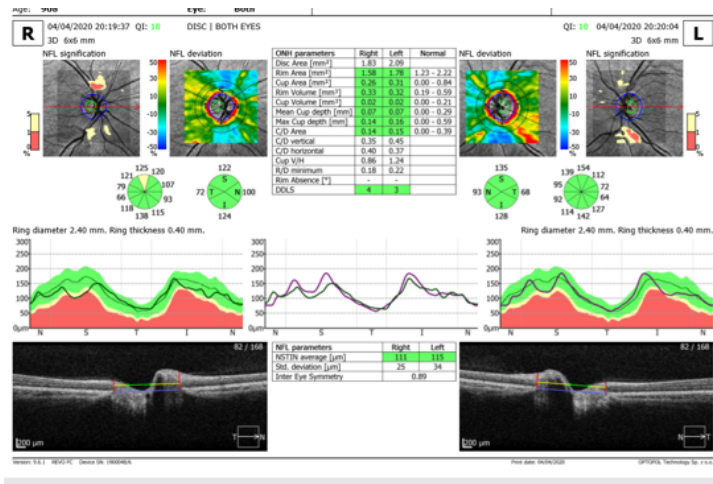
- Traditionally, many Optometrists, Ophthalmologists and other healthcare providers have strayed away from using remote desktop software in a consulting room.
- Obviously, there are ethical considerations for one abstaining from remote computer use in a consulting room.
- However, because of the risk associated with COVID 19 pandemic, a novel approach to develop a safe way for Optometrists, Ophthalmologists and other health care practitioners to evaluate patients at risk of sight loss needs to be considered, explored and further developed.

## Methods:

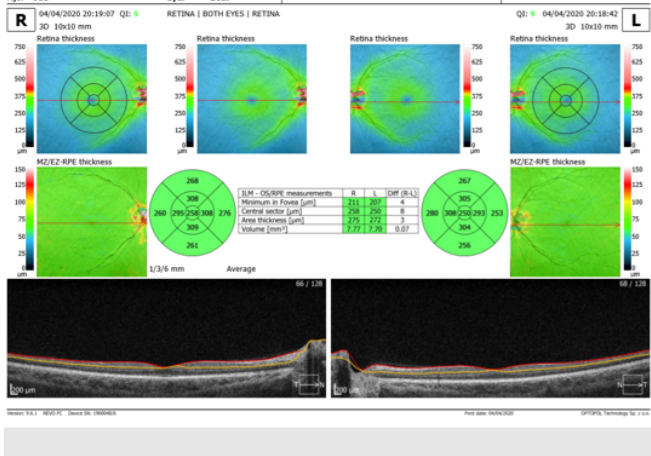
- The following will attempt to demonstrate and establish a protocol to collect Optical Coherence Tomography scans from patients remotely using software called *AnyDesk* on a *REVO Optopol FC* OCT Fundus Camera.
- The OCT is placed in an isolated room where the patient is given appropriate equipment to clean and disinfect the OCT and other necessary equipment.
- The practitioner will access the computer terminal from a consulting room using the any desk software.
- The images were then added to the documents with the participants full consent.

## Analysis:

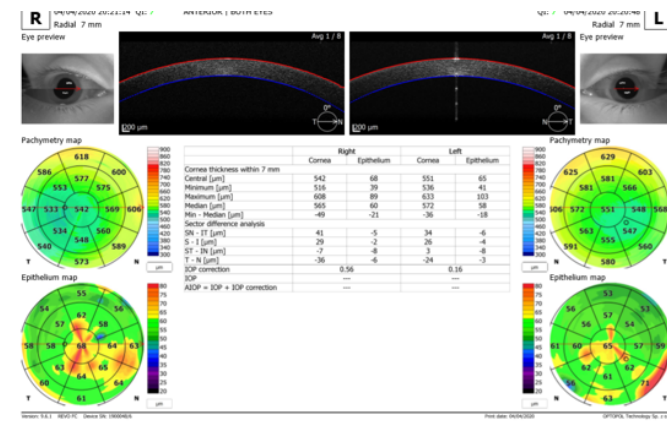
### • Figure 1 - Optic Disc OCT Scans



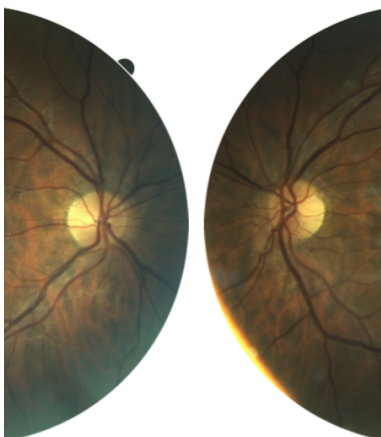
### • Figure 2 - Maculae OCT Scans



• Figure 3 – Pachymetry OCT Scans



• Figure 4 – Fundus Photos



Conclusion:

- In summary after viewing the data collected it appears this solution may present a cost-effective way to manage patients safely who are at risk of sight loss during the COVID-19 Pandemic while keeping healthcare practitioners at a lower risk of contracting the virus.

### **Discussion:**

- A leaflet could be produced in keeping with the Royal College of Ophthalmologists, College of Optometrists and NHS England guidelines to better inform the patient with clear instructions for disinfecting the instruments and how to position themselves for the test.
- This protocol could be used to ease the burden on Hospital Eye Departments by employing private business to utilize their OCT machines without the need for extensive Personal Protective Equipment.
- These scans could be uploaded to a secure service like eCare Evolutio's Evonnect or sent to clinicians via NHS.net accounts.

### **Further Notes & Limitations:**

- The scans utilized are of the authors eyes and have been anonymized with full consent given for teaching and research purposes.
- The lighting of the room was not measured but could be repeated in dark and light environments or if necessary, with dilation drops.