

## Optical Coherence Tomography

### (OCT)

Optical Coherent Tomography is a sophisticated technology that is used to assess the microscopic architecture of your eye. It has become essential in the diagnosis and management of many eye conditions especially those related to your macula and optic nerve.

It is a painless diagnostic test and is often likened to an MRI or x-ray of the eye. During the test many thousands of tiny photographs are taken of your eye, then collated and assessed.

In preparation for the test you will be escorted into a darkened room and will be asked to place your head in a special position and focus on a small target of light. The test usually takes 10-15 seconds per eye. Dr Kert will then examine the results and discuss the findings with you during your consultation.

An OCT uses light waves to create a very detailed image of important anatomical structures behind the pupil that cannot be visualised in a routine examination. The pictures display multiple slices through the retina and optic nerve which are collated, allowing a very complete microscopic image of these tiny structures at the back of your eye.

The resolution of this examination is in the region of 1/100<sup>th</sup> of a millimetre. The OCT can accurately demonstrate microscopic pathological changes in the retina and help diagnose and treat conditions such as:

- epiretinal membranes and macular holes
- macula oedema (fluid) associated with vascular diseases such as diabetes, age-related macular degeneration and vascular occlusive diseases eg retinal vein occlusions

The OCT is also of great importance in the monitoring and early detection of glaucoma. The OCT is able to capture detailed images of the optic nerve, and other parts of the eye that are damaged by glaucoma such as the nerve fibre layer and ganglion cell layer. The OCT is extremely useful in *early glaucoma diagnosis* as it allows us to accurately measure any changes that occur between visits that may indicate early progression of the disease (worsening of glaucoma).

If you have any questions, please feel free to discuss these with Dr Kert during your visit.