

## DIAGNOSTIC TESTING

---

### **OPTOMETRY:**

#### **Humphrey Visual Field (HVF)**

This is a visual eye examination that can detect dysfunction in central and peripheral vision which may be caused by conditions such as glaucoma, brain tumors, stroke, and other neurologic conditions.

#### **OCT (Optical coherence tomography)**

This is a computerized imaging technique that uses laser light to image thin slices through retina and optic nerve. It is very useful with assessing progression with diseases like glaucoma and macular degeneration.

#### **Retinal photos**

This is a color photograph of the fundus (macula, optic nerve, retinal vasculature, and peripheral retina). This is useful for documenting certain conditions such as glaucoma, a retinal hemorrhage, and diabetic retinopathy.

#### **Corneal Topography**

The corneal topography maps the cornea and is beneficial for patients undergoing cataract surgery requiring specialty lenses such as TORIC or multifocal lenses.

#### **Pachymetry**

This is a handheld ultrasonic device that measures central corneal thickness. This is useful in glaucoma patients to determine the “true IOP” and also useful in patients with corneal disease.

#### **Glaucoma Package (HVF/OCT/Pachymetry)**

This package covers the basics for the diagnosis and management of glaucoma. (see above for descriptions of included testing)

## DIAGNOSTIC TESTING

---

### **OPHTHALMOLOGY:**

#### **Humphrey Visual Field**

This is a visual eye examination that can detect dysfunction in central and peripheral vision which may be caused by conditions such as glaucoma, brain tumors, stroke, and other neurologic conditions.

#### **OCT (Optical coherence tomography)**

This is a computerized imaging technique that uses laser light to image thin slices through retina and optic nerve. It is very useful with assessing progression with diseases like glaucoma and macular degeneration.

#### **HRT (Heidelberg Retinal Tomography)**

Using a special scanning laser we get a cross section of the inner surface of the eye; the HRT detects very fine structural changes to the optic nerve and nerve fibre layer that can occur with glaucoma damage long before patients notice any changes in vision.

#### **Diurnal testing (All day testing)**

Measures IOP (Intraocular Pressure) through the course of one day starting at 8.00 am then approx. every 1.5hrs thereafter until 5pm. Patients take their eye drops as they normally would and to bring them to their appointment if they take them during the day. They can leave the clinic between pressure readings but must return on time.

No alcoholic beverages the evening before testing.

#### **Visante OCT**

An OCT specifically designed for anterior segment imaging. It is the latest in technology to assess and follow the characteristics in angle anatomy

## DIAGNOSTIC TESTING

---

### IOL Master

This is the most accurate way to measure your eyes prior to cataract surgery. The technique uses a laser technology to determine the power of the intraocular lens that will be implanted.

Special instructions: Contact lens wear prior to IOL or A-scan measurements can change the results.

We recommend No Soft CL wear for 7 days prior to measurement.

We recommend No Hard CL wear for 21 days prior to measurement.

### A-Scan

A standard technique used to measure the axial length for cataract surgery by ultrasound.

### B-Scan

An Ultrasound of the globe often ordered when there is a poor view into the eye. Patient receives anesthetic drops and tear gel is applied to the B-scan probe which images the eye.

### UBM (ultrasound biomicroscopy)

Is an important tool for assessing the anterior segment for pathology and angle characteristics and lens placement.

### Corneal Topography

The corneal topography maps the cornea and is beneficial for patients undergoing cataract surgery requiring specialty lenses such as TORIC or multifocal lenses.

### Wave Front Analysis

Analysis the way a wave front of light passes through the cornea and the crystalline lens, which are the light focusing components of the eye. Distortions that occur as light travels through the eye are called aberrations, representing specific vision errors.

### Pachymetry

This is a handheld ultrasonic device that measures central corneal thickness. This is useful in glaucoma patients to determine the "true IOP" and also useful in patients with corneal disease.