



# LASERVISIONSCOTLAND

THE EYECARE EXPERTS



CATARACT • LASER EYE SURGERY • REPLACEMENT LENS SURGERY • ICL • KERATOCONUS • GLAUCOMA • YAG LASER



# About Laser Vision Scotland

## Consultant-led laser eye care in a hospital you can trust

Laser Vision Scotland provides expert eye care to patients throughout Scotland, with clinics in Edinburgh, Stirling and Glasgow. Our clinics are all state of the art facilities, led by ophthalmic consultants who have over 25 years' experience in treating complex eye conditions.

We understand that where you choose to have vision correction treatment is a very important and personal decision and we strive to offer you the best treatment in the UK. Every Laser Vision Scotland patient receives bespoke care because your eyes are unique so your treatment should be too.

We provide our patients with safe, proven eye treatments, and the most accurate visual outcomes to return your sight to 20/20 vision or better whenever possible, all in a professional, hospital setting.



## Why choose Laser Vision Scotland?

- » **Consultant led care** - you will have access to your consultant surgeon at every step of the journey. Your consultant will provide your initial consultation, procedure and will guide your extensive follow up care.
- » **Expertise as standard** - our surgeons are based in Scotland and are experienced NHS consultant eye surgeons with particular expertise in refractive surgery. They have close ties to the expert refractive community within the UK, and professional affiliation to the international refractive societies.
- » **Customer service** - The way it should be - You will receive a dedicated member of the team who will after you from start to finish.
- » **Price transparency** - there are no hidden extras, the price you are quoted is the price you will pay.
- » **Take your time** - we will give you all the time you need to discuss your options, and will never put you under pressure to undergo treatment or make a decision.
- » **First class support** - our consultants are supported by a close yet professional team of diagnostic specialists, specialist nurses, optometrists and consultant anaesthetists.
- » **Excellent reputation** - Laser Vision Scotland has built an impressive reputation in patient care. Take a look at unbiased reviews on TrustPilot.



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THE EYECARE EXPERTS



## Cataracts

What you once saw as bright colours, now seem dull, your overall vision is blurred and seeing at night becomes more difficult. A cataract is a clouding of the natural lens inside your eye. It keeps light and images from reaching the retina.

Vision with cataracts has been described as seeing life through old, cloudy film. Cataracts can be a major cause of visual loss in older adults.

## Presbyopia

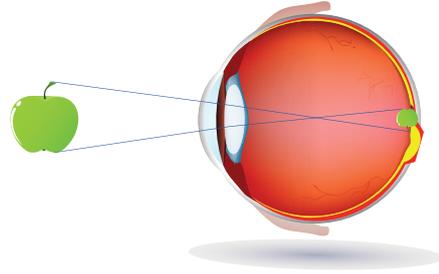
As we age, we all reach a stage where we start to lose our focusing ability for reading. Most people start to notice this in their mid forties and start to require reading glasses for small print. This occurs as the lens inside your eye ages becoming less elastic and flexible, reducing the eye's ability to change focus from distance objects to close up.

## Long sight (Hyperopia)

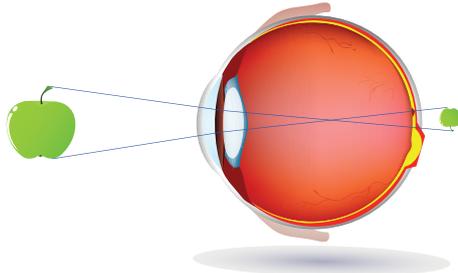
Long sighted people tend to have a shorter than average eye, which results in light focusing beyond the retina. Low hypermetropia is often tolerated until the natural ageing process begins in the lens.

Laser treatment is less commonly used for hypermetropia particularly in high prescriptions and commonly refractive lens exchange and intraocular lenses can be alternative treatment options.

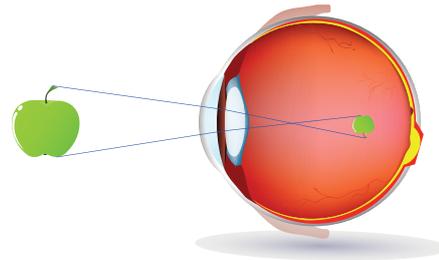
### Healthy eye



### Hyperopia



### Myopia



## Short sight (Myopia)

In order to see clearly the focusing system at the front of your eye (the cornea and lens) must bring light to focus on the retinal surface at the back of your eye. Short-sighted people have focusing which is too strong, so light is brought to focus before it reaches the retina. Normally this is due to the eye being slightly larger than normal. Even the slightest increase of 0.3mm in eye length makes a noticeable difference to focusing.

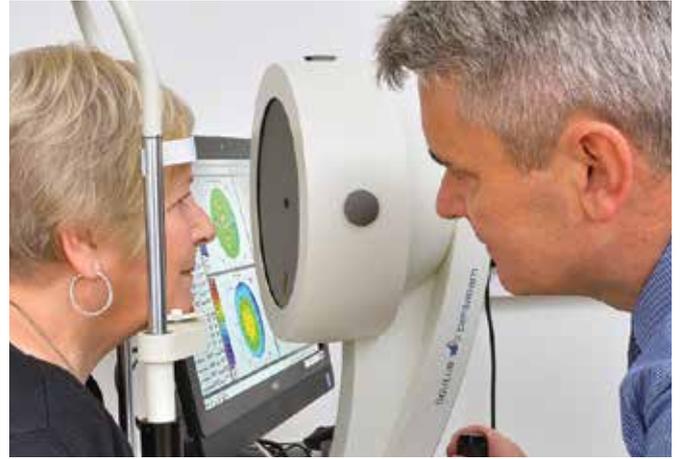
There are two commonly used vision correction techniques for myopia. Laser eye surgery gently reshapes the front surface of your eye (the cornea) so that it is less curved and has weaker light focusing properties. This procedure is known as LASIK or LASEK. Your eye surgeon will advise which technique you are best suited to. The second technique is refractive lens surgery (RLE), which involves replacing your natural lens with an artificial lens implant such as a multifocal lens. After refractive lens surgery you cannot develop cataracts as you get older.

# Treatments available at Laser Vision Scotland

**At Laser Vision Scotland we offer all proven vision correction solutions. Our consultant eye surgeons will take time to talk you through the most suitable options for your eyes and your lifestyle.**

Whether you are having cataract surgery, laser eye surgery, vision correction lens surgery, Laser Vision Scotland offers the highest standards of care.

We provide a complete range of vision correction solutions including treatment options for cataract surgery and laser eye surgery that are not available with the National Health Service.



## Treatments offered at Laser Vision Scotland:

### Cataract surgery

- Standard cataract surgery
- Trifocal cataract surgery
- Toric cataract surgery
- Laser assisted cataract surgery

### Replacement lens surgery

- Toric lens implants
- Trifocal lens surgery

### Laser eye surgery

- LASIK Laser eye surgery
- LASEK Laser eye surgery

### Implantable lens surgery

### Keratoconus treatment

- Collagen cross linking
- Corneal grafts

### YAG Laser



## What is a cataract procedure?

Removal of the cloudy natural lens, followed by replacement with a new artificial lens. A simple operation with little discomfort. It only takes a few minutes and (unless the patient requests a general anaesthetic) is carried out with local anaesthesia.

Patients typically return home the same day as their procedure. Eye drops may be prescribed to guard against infection and help your eye heal. For a few days, you may need to wear an eye patch to keep away irritants. Most patients see well enough to return to most of their routine activities within a few days of surgery.

## Toric Cataract Surgery

These lenses correct astigmatism allowing for sharper vision without the need for glasses. A small amount of astigmatism will blur your vision slightly, while larger amounts can cause your vision to be very blurred.

Toric lenses have a rugby ball shaped surface contour, which is positioned inside your eye to neutralize existing astigmatism. Toric lenses do not correct your near and distance vision, however it is possible to build toricity into trifocal lenses so that astigmatic eyes can also benefit from trifocals.



## Operation Steps

- 1** A tiny incision is made in the eye
- 2** An instrument about the size of a pen tip is inserted through the incision.
- 3** The instrument breaks the hard, clouded natural lens into tiny pieces and gently removes them.
- 4** Once the lens is removed, a replacement lens is inserted through the same tiny incision.
- 5** The replacement lens is set into position, taking the place of the natural lens.

## Trifocal Cataract Surgery

If you would like to reduce your reliance on glasses you may opt for trifocal cataract surgery. Trifocals allow you to see at near-distance, mid-distance and far objects.

This option is also available to patients with significant astigmatism. In suitable patients, trifocal lenses have a high success rate meaning patients who have previously required glasses often have good enough sight to be glasses free.

# Replacement lens exchange

Although one of the most commonly performed surgical procedures in the world, lens replacement is still one of the best kept secrets in vision correction. There are currently over 3 million people in the UK & Europe enjoying the benefits of a glasses-free life as a result of undergoing replacement lens surgery (RLE).

RLE may allow you to reduce or eliminate your dependence on glasses or contact lenses. Also known as lens exchange surgery or clear lens surgery, this short painless procedure is carried out as a day case treatment. The eye's natural lens is gently removed from the eye and is permanently replaced by an artificial intraocular lens (IOL).



A multifocal lens implant used in RLE.



Pentacam topography testing in preparation for RLE.

## Refractive Lens Exchange (RLE)

### What is RLE?

Replacement lens surgery is a technique for correcting vision so that short and long-sighted people, or those with astigmatism, no longer rely on glasses or contact lenses. The procedure is comparable to cataract surgery and patients are able to return to most activities with good vision after 1-2 days.

### Who is suitable for RLE?

Adults affected by long-sight and short-sight are suitable for RLE.

### Benefits of RLE

Refractive lens surgery offers long-term vision correction, normally for the rest of your life. Once completed, you will never develop cataracts.

### Before RLE

Extensive diagnostic testing, examination and counselling are performed before your surgeon helps you decide the best vision correction solution for you.

### The Procedure

The procedure for each eye is carried out separately, usually one week apart. The procedure itself takes 20 minutes for each eye and involves the use of a very specialised lens removal probe. Ultrasound waves are used to gently break down the eye's natural lens so it can be replaced with a monofocal or toric lens. Vision recovery is gradual over 2-3 days, and you can return home straight away.

### After RLE

You will have a protective transparent shield over your eye for 24 hours and will need to use eye drops for four weeks.



A simple lens replacement could restore vision lost to:

- **Myopia**
- **Hyperopia**
- **Presbyopia**

It will also prevent you from ever developing cataracts.

# Replacement lens exchange

## Clear vision near, far and everywhere in between

The technology surrounding replacement lenses is changing all the time. There are many choices of replacement lenses and the results can be extraordinary.

Depending upon what you choose and based on your lifestyle, you may be able to see near, far and everywhere in between, with little or no need for glasses or contact lenses.

## Monofocal lens

Designed to restore distance vision, most patients will need to wear spectacles for certain near and intermediate tasks, such as reading or working at a computer.



Near



Intermediate



Distance



## Toric Lens Implants

Toric lenses are a great choice of lens implant if you have astigmatism and wish to reduce or eliminate the effect of astigmatism on your vision.

Toric lenses work by counteracting the effects of astigmatism. They have a rugby ball shaped lens surface that is positioned inside the eye so that it cancels out the effect of the rugby ball shaped corneal surface.

## Trifocal Lens Surgery

Trifocal lenses have distance and near focus built into them and are designed to allow good vision for all distances so that glasses are no longer required. They do not work in the same way as bifocal or varifocal glasses so trifocal patients do not need to tilt their head up and down to see from near to distance.

Trifocal lenses are a sensible choice if you want to reduce your dependence on glasses. After surgery, most patients either stop needing glasses at all, or only need to wear them occasionally for certain activities.

# Laser eye surgery

**Laser eye surgery is a popular procedure for vision correction. Each year, around 15,000 cases were carried out in the UK. Laser eye surgery uses an excimer laser to reshape the cornea (the transparent layer covering the front of the eye).**

The most common use for laser eye surgery is to correct shortsightedness (myopia). But the technique is equally safe and effective for long-sightedness and mild astigmatism. The surgery suits people who want an alternative to contact lens or glasses wearing.

Your ophthalmologist will always take time to discuss the most suitable treatment for you. Depending on factors such

as age, an alternative procedure such as lens replacement may be more appropriate.

The Royal College of Ophthalmologists (RCO) recommends that doctors carrying out this surgery should always be registered ophthalmologists and have additional specialist training in laser refractive surgery. At Laser Vision Scotland, laser eye surgery will always be carried out by an experienced Consultant Ophthalmologist.

## LASEK

### What is LASEK?

LASEK is the safest of all the laser vision correction procedures. During LASEK an excimer laser is used to gently reshape the surface of your cornea. It is a one-step procedure with the laser itself typically lasting less than 10 seconds. LASEK is safer than LASIK, but during the first week the eyes tend to be more uncomfortable and the vision slightly more blurred during healing.

### Who is suitable for LASEK?

You are most suited to LASEK if you wish to have vision correction and are a young adult (aged 20-45) who wears glasses. It is suitable for treating mild to high levels of short-sightedness and mild levels of long sight.

### After LASEK

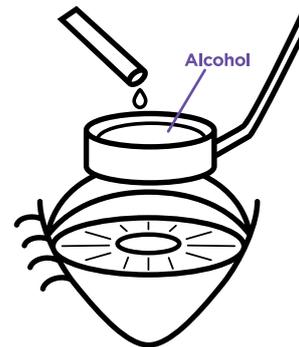
After treatment you will see more clearly straight away and will need to wear a contact lens for approximately five days. Initially your eyes will be sore and watery.

Vision quality fluctuates over the first days while the eye surface heals and you should expect to achieve driving standard vision after five to ten days.

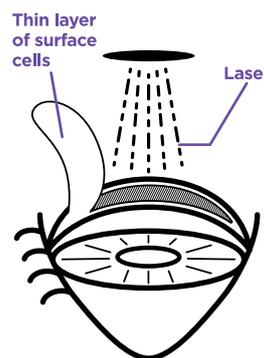
### Benefits of LASEK

LASEK offers precise vision correction with minimal dry eye problems. It does not involve the creation of a LASIK flap, and so avoids long-term complications such as flap injury.

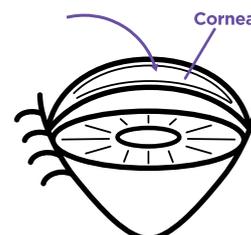
## LASEK (Laser Epithelial Keratomileusis)



1. Dilute alcohol is used to soften the epithelium surface cells.



2. The laser is gently applied under the surface cells to reshape the cornea.



3. The surface cells are carefully replaced back on the cornea as a sheet.

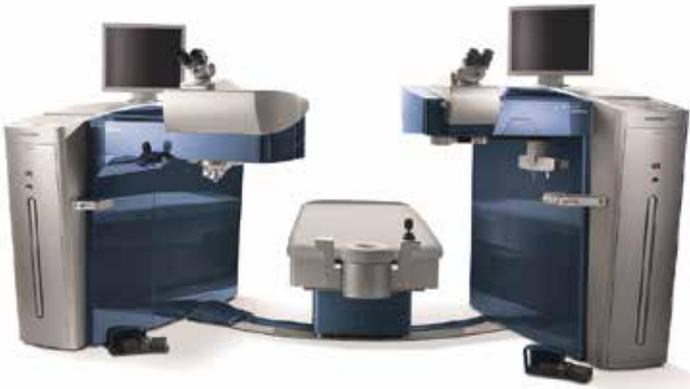
## LASIK

### What is LASIK?

LASIK is a commonly performed type of laser eye surgery for improving vision. The procedure is performed on the surface of the eye. A very specialised femtosecond laser is used to create a corneal flap, then an excimer laser gently and precisely reshapes the cornea under the flap. Finally the flap is replaced. The whole procedure takes around 20 minutes per eye. Vision recovery is often immediate.

### Who is suitable for LASIK?

Young adults affected by long-sight and short-sight are suitable for LASIK. It is suitable for treating mild to high levels of short sight and mild levels of long sight.



### After LASIK

Vision recovery is rapid with minimal discomfort. You will have protective contact lenses in your eyes and need to use eye drops for four weeks.

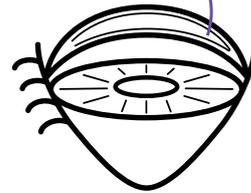
### Who is suitable for LASIK?

LASIK offers accurate vision correction with the least interruption to your busy lifestyle.

## LASIK

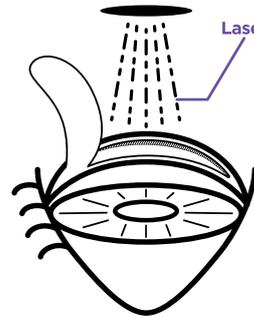
(Laser Assisted In-Situ Keratomileusis, flap 120 microns thick)

Corneal flap lifted



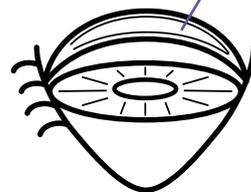
1. Femtosecond laser contact lens applied to create a flap on surface of cornea.

Laser



2. Laser is gently applied under the flap to reshape the cornea.

Cornea



3. The flap is carefully placed back on the reshaped cornea.

## Implantable Contact Lenses (ICL)

Implantable contact lenses are implanted in the eye for vision correction without taking the natural lens out. There are two types of implantable contact lens - one that sits in front of the pupil and one that sits behind the iris. Implantable lenses that sit behind the iris, such as the Visian ICL is the more common option.

ICL's are synthesised from high grade medical polymers which have been proven to be biocompatible inside the human eye for over half a century. In essence the ICL is a contact lens placed permanently or for the long term inside the eye. Before the procedure there is an extensive diagnostic evaluation to determine long term suitability for the ICL. The surgeon performs the procedure through a high powered ophthalmic microscope. The procedure takes around 30 minutes to complete and is carried out under local anaesthesia.

### Who is suitable for ICL?

Young patients who are unsuitable for laser eye surgery who are short sighted or long-sighted with or without astigmatism.

### Benefits of ICL:

ICL is highly effective in treating short sighted and long sighted prescriptions. Evidence suggests that 95% patients are satisfied with the procedure. It is a reversible operation and maintains the lens natural focus, unlike refractive lens exchange.

### After ICL:

Visual recovery can take up to a week. Postoperatively you will have tablets for 48 hours to keep the eye pressure from fluctuating and eye drops for four weeks.



Visian ICL

## Phototherapeutic Keratectomy (PTK)

PTK is an excimer laser procedure, which very precisely and gently removes an ultrathin layer of the surface cornea without affecting the focusing of the eye. Less commonly performed than LASEK and LASIK, PTK is helpful for improving vision in situations where infection or injuries have healed leaving behind superficial corneal scarring.



Your surgeon may also recommend PTK if you have an uncomfortable condition called recurrent corneal erosion syndrome, in which a longstanding corneal abrasion has not fully healed and every so often causes a surface breakdown, usually on waking, with associated pain, watering and light sensitivity. PTK laser resurfacing to treat recurrent erosion refreshes the corneal surface, allowing it to heal with a strong new layer.

If your surgeon recommends PTK, your experience will be the same as for LASEK, with some eye discomfort lasting several days, the need to wear a special contact lens for one week after treatment, and regular eye drops for one month. The success rate of PTK for treating corneal scarring and erosions is approximately 90%.

# Keratoconus treatment

**Keratoconus and other corneal ectasias are conditions that result in distortion of the smooth curvature of the cornea due to insufficient tissue stiffness. This resulting distortion blurs vision through a combination of increasing short sight and astigmatism.**

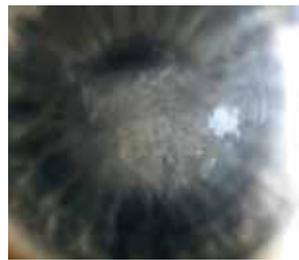
Corneal cross linking (CXL) induces tissue stiffening that stops keratoconus progressing, and research has shown that some patients also benefit from a partial reversal of their keratoconus as well. In rare situations CXL may be used to treat problems following on from LASIK.

## Corneal Graft

(Penetrating keratoplasty PK, Deep anterior lamellar keratoplasty DALK, Descemet stripping endothelial keratoplasty DSEK, Descemet membrane endothelial keratoplasty DMEK).

As you will see from the list above, corneal graft surgery now includes a variety of procedures in which the clear window at the front of the eye (the cornea) is removed and replaced by donor cornea to improve vision. Corneal graft surgery is more complex and takes longer than most other types of eye surgery, and is only carried out by a small number of eye specialists, and only in the expert environment of eye hospitals such as Laser Vision Scotland.

Common eye conditions that are treated by corneal graft surgery include keratoconus, corneal scarring after previous eye infection, cloudy cornea due to fluid retention and corneal injury. Depending on the exact nature of the corneal problem, your surgeon will advise whether it is necessary to replace the full thickness of the cornea or just the front or back surface.



Cloudy cornea



Clear corneal graft

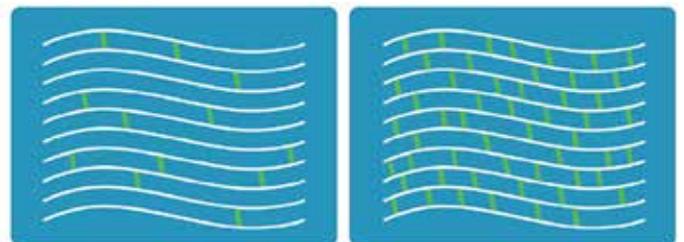
Corneal graft surgery lasts between one and two hours, and is usually performed while you are asleep under general anaesthetic. Of all the organ transplants, corneal graft surgery is the most successful, with long-term graft survival rates of up to 90% or more. In the United Kingdom there are a small number of specialist facilities (Bristol, Manchester) called 'Eye Banks' where corneal grafts are rigorously tested and stored prior to transplant surgery.

Following corneal graft surgery long term care is required including the use of daily eye drops, often for several years.

## Collagen Cross Linking (CXL)

CXL is a relatively new laser treatment, normally used for the treatment of teenagers and young adults. It stabilises and often partially reverses failing vision due to keratoconus. CXL is a painless day procedure lasting around half an hour, and can be safely carried out using drops only for anaesthetic, or general anaesthetic if preferred. The treated eye is normally sore and watery for the first few days after treatment while the eye surface heals.

During CXL, the eye is initially numbed with anaesthetic drops and special drops called riboflavin are washed onto the eye for a few minutes. The patient then looks at a blue light for 20 minutes, and during this time the dye and the light interact to stiffen the cornea through a process of



linking together protein molecules. The procedure is very gentle, and after treatment most people return straight home, with a special contact lens in their eye for a few days to improve comfort. CXL is effective in over 90% of patients and forms an important part of the treatment of patients with worsening keratoconus.

## The surgeons

**Consultant Ophthalmologists, Mr Sanjay Mantry and Mr Jonathan Ross lead the Laser Vision Scotland team. Mr Mantry and Mr Ross are among the most experienced Consultant Ophthalmic Surgeons in the UK and Europe. Mr Mantry is also a leading authority in refractive laser eye and corneal surgery while Mr Ross is one of the busiest cataract surgeons in Scotland, performing up to 2000 cataract operations every year.**



### Mr Sanjay Mantry

**FRCSEd, FRCS (Glas), MRCOphth (Lond)**

**Consultant Ophthalmologist with a specialist interest in the cornea and refractive surgery**

Mr Mantry's Higher Specialist Training (HST) was on the West Midlands Rotation from 2000 - 2004, where he developed subspecialty interest in anterior segment. He has had the opportunity to do two renowned fellowships in anterior segment in Birmingham and Nottingham. During his training he developed a special interest in lamellar keratoplasty and corneal refractive surgery.

Mr Mantry is a senior fellowship examiner for the Royal College of Physicians and Surgeons of Glasgow and has published over 20 peer reviewed articles. He is an honorary lecturer for Glasgow Caledonian University.

He is involved with teaching optometrists and ophthalmologists in training and is a college tutor and educational supervisor. He is a specialist in cataract surgery for NHS Scotland.

Mr Mantry provides tertiary corneal refractive surgery expertise for routine and complex corneal problems. He has performed over a 2,000 laser refractive procedures and over 12,000 lens procedures (cataract and RLE). He is one of the invited faculty for national and international conferences for cornea, cataract and refractive surgery and is a key opinion leader in his field.



### Mr Jonathan J Ross

**MBChB (Glas) MRCSEd (Edin) FRCOphth (Lon) FRCPSG**

**Consultant Ophthalmologist with a specialist interest in cataract and refractive eye surgery**

Mr Ross is originally from Edinburgh and has now been a full time eye surgeon for 21 years, performing approximately 1500 eye surgeries every year in central Scotland. He continues to deliver high volume surgery within the NHS as a core member of the Scottish Cataract Team at Golden Jubilee National Hospital, a leading role in the design and development of the new, state-of-the-art national cataract centre for Scotland

This service doubles NHS Scotland's cataract capacity; and benchmarks cataract services around Europe and beyond.

Mr Ross believes in delivering world class refractive eye care in Scotland, with the best technology available and time to talk to patients and develop tailored treatment. To this end he formed Laser Vision Scotland Hospital in 2013 and with the help of his colleague Sanjay Mantry and a team of brilliant support staff has developed the

service that now exists today. Most of the patients who attend Laser Vision Scotland are referred by friends or family who have already been under our care.

Mr Ross is a Fellow of the Royal College of Ophthalmologists of the United Kingdom, Examiner for the Royal College of Surgeons of Edinburgh, Examiner for the Royal College of Physicians and Surgeons of Glasgow, Member of the European Society of Cataract and Refractive Surgeons, Elected council member of the United Kingdom and Ireland Society of Cataract and Refractive Surgeons, and has for many years been an author and peer reviewer for several scientific journals including the British Journal of Ophthalmology.

## Making an appointment

The best way to have your questions answered in full is to have a complimentary initial screening. This no-obligation, free of charge appointment with our diagnostic experts will take you through a selection of diagnostic tests to determine the best treatment for you.

## Consultation

Our Consultant Ophthalmologists will carry out further diagnostic testing during a highly detailed and thorough pre-operative assessment. Your consultant will then create a personalised treatment plan for you and your eyes. Your consultant will take time to explain the different treatment options for your vision and what type of treatment if any, would suit your lifestyle, explaining the pros and cons of each type of treatment.

## Treatment

If you decide to proceed with treatment, you will return to the hospital on your day of surgery and be cared for by our small team, returning for aftercare appointments as required. You will be given a telephone number to call should you have concerns at any time of day as well as your consultants personal mobile number.



## Pricing of treatment

The cost of treatment depends on the type of surgery chosen and other factors relating to your ocular anatomy and visual quality.

This gives you the confidence of knowing there will be no unexpected bills. Our inclusive price is a simple, fixed price with no hidden extras. Although uncommon, complications do occasionally occur and for additional peace of mind, your inclusive price includes the cost of fixing any clinical complications that arise as a result of your surgery for six months after treatment.

### Funding your treatment

Paying for private treatment is simple. If you don't have private medical insurance you can self-fund or take advantage of interest free finance or an interest bearing loan, so you don't have to wait for treatment.

Please speak to our clinic staff if you are interested in finance options available to you.

### How can I find out more?

Contact our Customer service team on **0800 8 20 20 80** or visit [www.laservisionScotland.co.uk](http://www.laservisionScotland.co.uk).

### Guide prices per eye

(correct at time of print)

Cataract surgery £2,650

RLE £3,200

Laser £1,500

Yag £800 (£1000 for both)

Corneal cross linking £2,450

Implantable contact lens £3,600

## Price transparency

We will never tie you in with a deposit, or give you the high-pressure sales pitch, or recommend any treatment other than that which we believe is in your best interests.

Just ask us for more details.

Consultation and surgery are available at the following locations:



## Stirling

BMI Kings Park Hospital  
Polmaise Rd, FK7 9JH



## Edinburgh

The Edinburgh Clinic  
40 Colinton Rd,  
EH10 5BT



## Glasgow

BMI Ross Hall Hospital  
221 Crookston Road,  
G52 3NQ



## Edinburgh

Spire Shawfair Park Hospital,  
10 Easter Shawfair, EH22 1FE

**One number for all:**

**0800 8 20 20 80** (office hours)

**[www.laservisionscotland.co.uk](http://www.laservisionscotland.co.uk)**

A member of our patient care team will be assigned to look after you throughout your treatment. We're available to you from 7am to 10pm, 365 days a year. You will have our direct contact information so if you need us you won't need to wait.

We can help with:

- Questions you have about our services and treatments
- Information about the choice of hospitals available to you, where surgery is available soonest for example.
- Arranging your initial appointment and theatre dates
- Pricing queries
- Following up on correspondence to the hospital
- Keeping your community optometrist updated on your progress
- Talking through any worries and / concerns that may arise

We are always here for you and are very happy to help.

**Victoria Beesley**  
Patient Care Manager



