

Ellex 2RT RETINAL REGENERATION THERAPY

Frequently Asked Questions

What is Ellex 2RT?

Ellex Retinal Regeneration Therapy (Ellex 2RT™) represents the newest in a series of advancements in retinal treatment. It is a non-thermal, nanosecond laser therapy that stimulates a natural, biological healing response in the eye to treat a range of degenerative retinal diseases.

Until now, laser therapies for the treatment of retinal disease have targeted late-stage complications, and have often focused on preserving central vision at the expense of compromised peripheral vision as the treatment strategy relied on sacrificing the peripheral retina in order to preserve those areas of the retina responsible for central vision. But with the advancement of Ellex 2RT™, ophthalmologists have the potential to treat retinal diseases much earlier – halting disease progression and preserving functional vision before irreversible physical damage and vision loss occurs.

What can Ellex 2RT potentially treat?

Ellex 2RT™ is currently undergoing clinical trial for the treatment of Age-Related Macular Degeneration (AMD) and Diabetic Retinopathy - two of the most common causes of vision loss and blindness in the developed world.

Why is Ellex 2RT potentially a better therapy?

With Ellex 2RT™, there is the potential to treat retinal diseases earlier, before irreversible physical changes occur and before patients experience significant vision loss.

How does Ellex 2RT work?

Ellex 2RT™ uses extremely short pulses of nanosecond laser energy to stimulate the retinal pigment epithelium (RPE), triggering a process of cellular regeneration. This breakthrough approach retains the therapeutic effect of laser therapy whilst eliminating the thermal tissue damage inherent in conventional retinal laser treatments. Furthermore, Ellex 2RT™ is painless for the patient, faster for the ophthalmologist to administer, and eliminates the risk of damage to all aspects of retinal function.

What is the science behind Ellex 2RT?

Ellex 2RT™ is designed to treat a range of retinal diseases caused by a compromised retinal pigment epithelium (RPE) and Bruch's membrane, the structures responsible for transporting the energy supply to, and removing the waste from, the retinal photoreceptors. Ellex 2RT™ stimulates a biological healing process that results in cellular regeneration, reversing these impaired transport mechanisms. Laboratory studies undertaken by Professor John Marshall, PhD, FRCPATH, FRCOphth (Hon), at St. Thomas' Hospital, London, UK, demonstrated that Ellex 2RT™ rejuvenates the entire transport mechanism of the retina and improves hydraulic conductivity of Bruch's membrane.

How is Ellex 2RT different from micropulse lasers and SRT?

In recent years, micropulse laser technology and SRT (Selective Retinal Therapy), have emerged as possible alternatives to photocoagulation for the treatment of retinal disease. Both treatments use considerably faster laser pulses than conventional laser photocoagulation, but still inflict thermal damage to the retina. In contrast, Ellex 2RT™ uses nanosecond pulses of laser energy – delivering 500 times less energy, and without the risk of thermal damage.

What type of laser is used for Ellex 2RT?

The Ellex 2RT™ laser systems are Q-switched green YAG lasers that produce very precise 3 nanosecond pulses of 532nm light energy. These systems were developed specifically for Ellex 2RT™ laboratory and clinical trials by the Ellex advanced research team in Australia. Although there are many types of lasers used in ophthalmology, Ellex 2RT™ parameters are unique and can only be performed with an Ellex 2RT™ laser system.

Is Ellex 2RT patented?

Yes, Ellex has international patents for the Ellex 2RT™ technology and method.

When will Ellex 2RT be commercially available?

At this point Ellex 2RT™ is a research program. Although early clinical data is encouraging, more trials are needed to establish the clinical efficacy of Ellex 2RT™ for a number of different clinical indications.