

Selective Laser Trabeculoplasty

C6111 unilateral Insurance Code or C6110 Bilateral.

Selective Laser Trabeculoplasty, or SLT, is a form of laser surgery that is used to lower intraocular pressure in glaucoma. It is used when eye drop medications are not lowering the eye pressure enough or are causing significant side effects. It may sometimes be used as initial treatment in glaucoma.

SLT has been in use for 12 years in the United States and around the world. In this article we present some of the unique aspects of this treatment along with observations from years of experience and treatment of patients. The article is designed as a discussion to answer the most common patient questions and concerns regarding the procedure.



1. History

Dr. Mark Latina is indeed credited with the invention of Selective Laser Trabeculoplasty (SLT). SLT is a form of laser treatment used in the management of glaucoma, a condition characterized by increased intraocular pressure (IOP) leading to optic nerve damage and potential vision loss.

Developed in the late 1990s, SLT represents a significant advancement in glaucoma treatment. Its selective approach targets specific pigmented cells in the trabecular meshwork of the eye, the area responsible for fluid drainage. Unlike its predecessor, Argon Laser Trabeculoplasty (ALT), SLT uses a lower-energy laser and a short pulse duration, which selectively affects pigmented trabecular meshwork cells without causing widespread thermal damage to surrounding tissue.

This selectivity not only improves the safety profile of the procedure but also allows for the possibility of retreatment if necessary. SLT has become a widely accepted and commonly used procedure in the management of various types of open-angle glaucoma. Dr. Latina's contribution to the field of ophthalmology through the development of SLT has had a lasting impact on the treatment strategies for managing glaucoma.

2. Who is a candidate for SLT?

Patients who have open-angle glaucoma (the drainage system in the front part of the eye is open) and are in need of lowering of their intraocular pressure (IOP) are eligible for the procedure. Your eye doctor will make the final determination if you are a candidate.

3. How does it work?

Laser energy is applied to the drainage tissue in the eye. This starts a chemical and biological change in the tissue that results in better drainage of fluid through the drain and out of the eye. This eventually results in lowering of IOP. It may take 1-3 months for the results to appear. **Why is it called Selective?** The type of laser used has minimal heat energy absorption because it is only taken up by selected pigmented tissue in the eye. Sometimes it is referred to as a "cold laser." Because of this, the procedure produces less scar tissue and has minimal pain.

4. What are the risks?

One key aspect of SLT is a favorable side effect profile, even when compared with glaucoma medications. Post-operative inflammation is common but generally mild, and treated with observation or eye drops or

an oral non-steroidal anti-inflammatory drug. There is an approximately 5% incidence of IOP elevation after laser, which can be managed by glaucoma medications and usually goes away after 24 hours.

5. How effective is it?

SLT lowers the IOP by about 30% when used as initial therapy. This is comparable to the IOP lowering of the most powerful and commonly used class of glaucoma medication (prostaglandin analogs). This effect may be reduced if the patient is already on glaucoma medications.

6. How long does the effect last?

The effect will generally last between 1-5 years, and in rare cases, longer than that. If it does not last at least 6-12 months, it is usually not considered successful.

7. What happens if it wears off?

If SLT is effective at lowering IOP but this wears off over several years, the procedure can be repeated. But the second treatment may not be as effective as the first and may not last as long. If SLT is not initially successful, repeat treatment is not likely to be effective. Alternatively, glaucoma medication can be used if the effect wears off over time.

8. What happens if it doesn't work?

If SLT fails to lower the IOP, then the glaucoma is treated by other means such as medications or conventional surgery. The laser does not affect the success of these other types of treatment.

9. What is the cost?

Since the procedure is an accepted glaucoma treatment, and is FDA approved, it is covered by Medicare and medical insurance. The cost for an uninsured individual or with an insurance co-pay will vary.

10. Will I still need to use glaucoma medications?

Some patients can be controlled with just laser treatment. Others require additional IOP lowering and may therefore need to use glaucoma medication as well. Think of the SLT as equivalent to one glaucoma medication. Just as some patients will require more than one glaucoma medication to control their IOP, some may also require laser plus one or more glaucoma medications. It is important to remember that SLT is not a cure for glaucoma, just as medication and surgery are not. Whatever method is used to treat glaucoma, appropriate follow up and testing with your eye care professional is critical.

11. Laser location for Treatment.

There is a Selective Laser Trabeculoplasty laser at Western eye hospital in Marylebone Road, and at Bishops Wood Hospital in the grounds of Mount Vernon hospital in Northwood. There is no laser at The Clementine Churchill Hospital. The procedure takes about 20 minutes and is totally painless. Most insurance companies do cover this treatment with code C6111 Unilateral or C6110 Bilateral. If not the charges are approximately £375 for hospital and £300 for surgeon fees.

12. Post operation care

Do not rub the eye after wards. Use Yellox twice per day for a week. Continue your glaucoma drops until Mr. Lee advises otherwise. You may continue all normal activity afterwards.

13. LiGHt Trial Landmark trial of Selective Laser Trabeculoplasty vs Standard Eye drops treatment

The term "LiGHt Trial" in the context of glaucoma refers to the "Laser in Glaucoma and Ocular Hypertension" trial. This landmark study was designed to compare the effectiveness and safety of selective laser trabeculoplasty (SLT) versus standard medical therapy (eye drops) for the treatment of primary open-angle glaucoma (POAG) and ocular hypertension (OHT).

The LiGHT Trial aimed to determine whether SLT, when used as a first-line treatment, could be more effective, safer, or more cost-effective compared to the traditional approach of prescribing topical medications for lowering intraocular pressure (IOP), which is the primary risk factor for glaucoma progression.

Key findings from the LiGHT Trial, which have had a significant impact on glaucoma management, include:

1. **Effectiveness:** The study found that SLT was not inferior to eye drops in controlling IOP in patients with POAG or OHT. In many cases, patients treated with SLT achieved target IOP levels without the need for glaucoma medications.
2. **Quality of Life:** Patients who underwent SLT reported a higher quality of life compared to those using eye drops, likely due to the avoidance of medication-related side effects and the convenience of not having to adhere to a daily medication regimen.
3. **Cost-Effectiveness:** SLT was found to be a cost-effective alternative to eye drops, considering the long-term costs associated with purchasing medication and the potential side effects and adherence issues associated with topical treatments.
4. **Safety:** SLT demonstrated a strong safety profile, with fewer side effects compared to the long-term use of topical medications.

Based on the results of the LiGHT Trial, there has been increased interest in considering SLT as a first-line treatment option for patients with POAG and OHT. This shift in treatment paradigm highlights the importance of individualized care in glaucoma management, where the choice of treatment is tailored to the patient's specific needs, lifestyle, and the potential risks and benefits of each option.

The LiGHT Trial has contributed significantly to the field of glaucoma research and treatment, providing robust evidence to support the use of SLT as an effective, safe, and cost-effective option for managing primary open-angle glaucoma and ocular hypertension.

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