

Treatment Guidelines for Selective Laser Trabeculoplasty

The following guidelines relate to treatment of Selective Laser Trabeculoplasty or SLT with the LIGHTMED LIGHTLas SLT, LIGHTLas SLT Deux or LIGHTLas SLT Deux-V laser systems.

It is important to note that all information contained herein has been compiled based on results of various generic clinical studies and investigations, and intended to serve as general guidance only. While SLT provides a highly effective and minimally invasive treatment for the majority of patients with elevated intraocular pressure (IOP), LIGHTMED strongly recommends that all physicians novel to this technique seek adequate training, and understand the latest suggested methods of treatment prior to commencing treatment.

Q: What factors should I look for to qualify my patient?

Most adult patients with an elevated IOP can be effectively treated with an SLT laser. Treatment indications include:

- Ocular hypertension (elevated IOP)
- Primary open angle glaucoma (including normal tension glaucoma)
- Secondary open angle glaucoma (pseudoexfoliation and pigment dispersion glaucoma)

SLT may be used as the first-line treatment instead of glaucoma drops, or in addition to glaucoma therapy. SLT is especially useful for patients who may not comply with long-term drop use, may wish to minimize drug-induced side effects, or who may not have responded to drug therapy previously.

Q: When is SLT not indicated?

Contraindications for SLT include the following clinical scenarios:

- Inflammatory or uveitic glaucoma
- Pediatric glaucoma with developmental abnormalities, such as ICE syndrome
- Neovascular glaucoma
- Narrow angle glaucoma
- Angle recession glaucoma

Q: What are the side effects of the SLT laser procedure?

The SLT procedure has been successful for over two decades with rare complications and side effects in comparison to topical treatment. Post-therapy inflammation, if experienced, is usually transient and easily treatable. A small percentage of patients may see an increase in IOP right after SLT treatment; however, it usually diminishes within 24 hours.

Treatment Overview:

Pre-Treatment

1. Approximately 15 minutes prior to SLT, administer an alpha agonist glaucoma drop, such as apraclonidine or brimonidine.

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2. A few minutes prior to SLT, administer a topical anesthetic, such as proparacaine.

Laser Settings & Treatment Steps

1. The optimal level of energy for each patient is determined by the degree of pigmentation in the trabecular meshwork (TM). In general, the TM is more heavily pigmented in the inferior 180° versus the superior 180°.
2. The treatment spot size with SLT is fixed at 400µm which covers the entire width of the TM. The pulse duration is set at 3ns.
3. Common energy settings for SLT vary between 0.4mJ and 0.8mJ – the higher energy level corresponds to lighter TM pigmentation and the lower energy level for darker TM pigmentation.
4. Titrate the energy at 0.1mJ increments until the appearance of micro-cavitation bubbles are observed next to the TM. This is evidence that the correct treatment threshold is obtained.

Treatment Tips

- Use a gonio laser lens without magnification to avoid changes to the spot size.
- The laser should be focused on the TM to deliver treatment, which results in the aiming beam not being in sharp focus in this location.
- SLT laser protocols vary from treating 180° versus 360° of the TM. Treatment of a 180° area would equate to approximately 50 contiguous, non-overlapping spots along the TM.
- There is a higher risk of IOP spike when treating 360°. Most IOP spikes are transient and should diminish within one to two days, but may need post-operative treatment.
- Patients with pigmentary or pseudoexfoliation glaucoma are at an increased risk of post-SLT IOP spike.

Post-Treatment

1. Immediately following treatment, administer another dose of an alpha agonist glaucoma agent and recheck IOP in approximately 1 hour.
2. If the post-operative IOP is elevated, the patient will require additional treatment and more careful follow-up with a repeat IOP check the next day.
3. If IOP is normal, follow-up visits are typically scheduled at 1 week, 4 weeks and 3 months.
4. Patients may resume their glaucoma drops immediately after SLT.
5. Many ophthalmologists elect to prescribe a short course of non-steroidal, anti-inflammatory drops such as Ketorolac or Acular four times daily for 3-5 days.

Reimbursement

CPT Code – Selective Laser Trabeculoplasty

Trabeculoplasty by laser surgery

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