

Clinical Policy: Laser Trabeculoplasty

Reference Number: CP.VP.38

Last Review Date: 08/2025

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See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

Description

Laser trabeculoplasty is a surgical treatment for open angle glaucoma that lowers intraocular pressure. This policy describes the medical indications for performing a laser trabeculoplasty.

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® (Centene) and Envolve Vision, Inc.® (Envolve) that laser trabeculoplasty is **medically necessary** for the following indications:
 - A. Primary open angle glaucoma in patients at high risk for nonadherence to medical therapy, including those who cannot or will not use medications reliably due to cost, memory problems, difficult with instillation or intolerance to the medication.

Background

Laser trabeculoplasty lowers IOP by improving aqueous outflow and can be performed using argon, diode, and frequency-doubled neodymium: yttrium-aluminum-garnet (Nd:YAG) lasers.

Medications that are not being used chronically may be used perioperatively to avert temporary IOP elevations, particularly in those patients with severe disease. Brimonidine has been shown to be as effective as apraclonidine in preventing immediate IOP elevation after laser trabeculoplasty. Treating 180 degrees reduces the incidence and magnitude of postoperative IOP elevation compared with 360-degree treatment.

Argon and diode laser trabeculoplasty

Studies using continuous-wave argon laser with a wavelength spectrum that peaks at 488nm (argon laser trabeculoplasty [ALT]) found that treatment increases aqueous outflow and provides a clinically significant reduction of IOP in more than 75% of initial treatments on previously unoperated eyes. Since these initial studies were performed, more compact solid-state diode lasers have mostly replaced the original argon laser with equal IOP-lowering efficacy and safety. For patients initially treated with ALT, the amount of medical treatment required for glaucoma control is often reduced. Results from long-term studies of patients receiving maximum medical therapy who subsequently had laser and incisional surgery indicate that 30% to more than 50% of eyes require additional surgical treatment within five years after ALT. For eyes that have failed to maintain a previously adequate response, repeat ALT has a low long-term rate of success, with failure occurring in nearly 90% of these eyes by two years. Argon laser trabeculoplasty may be performed to 180 degrees or to 360 degrees. After previous applications to the full circumference of the anterior chamber angle, repeat ALT has a lower success rate than initial therapy in eyes that have not had a reduction in IOP for at least a year following the first laser surgery. Compared with initial laser trabeculoplasty, there is an increased risk of complications such as IOP spikes after repeat ALT.

Selective laser trabeculoplasty

The introduction of selective laser trabeculoplasty (SLT) is most likely responsible for the increase in use of laser trabeculoplasty in 2001 after a previous decline. Selective laser trabeculoplasty uses a 532nm, Q-switched, frequency-doubled, Nd:YAG laser that delivers less energy and is selectively absorbed by pigmented cells in the trabecular meshwork. These attributes produce less thermal damage to the trabecular meshwork compared with ALT. However, several prospective and retrospective studies indicate that SLT appears comparable to but not better than ALT in lowering IOP. Selective laser trabeculoplasty also appears to be comparable in efficacy to medical therapy with prostaglandin analogs, although in one prospective study, SLT was only comparable to latanoprost when 360 degrees of the trabecular meshwork was treated. In this study, latanoprost had a better IOP-lowering effect compared with 90 and 180 degrees of treatment. A multicenter randomized clinical trial compared SLT and medical therapy as initial treatment for open angle glaucoma. Similar IOP reduction was seen in the SLT and medication groups after 1 year of follow-up, although this study may have had insufficient statistical power to detect a difference. It has been suggested that SLT has greater success than ALT with repeated treatments, but no controlled randomized clinical trial has demonstrated this finding. Similar IOP reduction and success rates have been observed with repeat SLT compared with initial SLT in retrospective studies. The safety profile of SLT appears to be good, with mild anterior chamber inflammation after treatment and less ocular discomfort compared with ALT.

Intraocular pressure spikes have been noted after SLT in 4.5% to 27% of eyes in various studies, which are similar to rates observed with ALT. Clinical experience suggests that eyes with more heavily pigmented trabecular meshwork are more prone to IOP spikes.

Coding Implications

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CPT® Codes	Description
65855	Trabeculoplasty by laser surgery

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

+ Indicates a code requiring an additional character

ICD-10-CM Code	Description
H40.011	Open angle with borderline findings, low risk, right eye
H40.012	Open angle with borderline findings, low risk, left eye
H40.013	Open angle with borderline findings, low risk, bilateral
H40.021	Open angle with borderline findings, high risk, right eye

ICD-10-CM Code	Description
H40.022	Open angle with borderline findings, high risk, left eye
H40.023	Open angle with borderline findings, high risk, bilateral
H40.051	Ocular hypertension, right eye
H40.052	Ocular hypertension, left eye
H40.053	Ocular hypertension, bilateral
H40.1111	Primary open-angle glaucoma, right eye mild stage
H40.1112	Primary open-angle glaucoma, right eye, moderate stage
H40.1113	Primary open-angle glaucoma, right eye severe stage
H40.1121	Primary open-angle glaucoma, left eye, mild stage
H40.1122	Primary open-angle glaucoma, left eye, moderate stage
H40.1123	Primary open-angle glaucoma, left eye, severe stage
H40.1131	Primary open-angle glaucoma, bilateral, mild stage
H40.1132	Primary open-angle glaucoma, bilateral, moderate stage
H40.1133	Primary open-angle glaucoma, bilateral, severe stage
H40.1211	Low-tension glaucoma, right eye, mild stage
H40.1212	Low-tension glaucoma, right eye, moderate stage
H40.1213	Low-tension glaucoma, right eye, severe stage
H40.1221	Low-tension glaucoma, left eye, mild stage
H40.1222	Low-tension glaucoma, left eye, moderate stage
H40.1223	Low-tension glaucoma, left eye, severe stage
H40.1231	Low-tension glaucoma, bilateral, mild stage
H40.1232	Low-tension glaucoma, bilateral, moderate stage
H40.1233	Low-tension glaucoma, bilateral, severe stage
H40.1311	Pigmentary glaucoma, right eye, mild stage
H40.1312	Pigmentary glaucoma, right eye, moderate stage
H40.1313	Pigmentary glaucoma, right eye, severe stage
H40.1321	Pigmentary glaucoma, left eye, mild stage
H40.1322	Pigmentary glaucoma, left eye, moderate stage
H40.1323	Pigmentary glaucoma, left eye, severe stage
H40.1331	Pigmentary glaucoma, bilateral, mild stage
H40.1332	Pigmentary glaucoma, bilateral, moderate stage
H40.1333	Pigmentary glaucoma, bilateral, severe stage
H40.1411	Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage
H40.1412	Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage
H40.1413	Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage
H40.1421	Capsular glaucoma with pseudoexfoliation of lens, left eye, mild stage
H40.1422	Capsular glaucoma with pseudoexfoliation of lens, left eye, moderate stage
H40.1423	Capsular glaucoma with pseudoexfoliation of lens, left eye, severe stage
H40.1431	Capsular glaucoma with pseudoexfoliation of lens, bilateral, mild stage
H40.1432	Capsular glaucoma with pseudoexfoliation of lens, bilateral, moderate stage

ICD-10-CM Code	Description
H40.1433	Capsular glaucoma with pseudoexfoliation of lens, bilateral, severe stage
H40.151	Residual stage of open-angle glaucoma, right eye
H40.152	Residual stage of open-angle glaucoma, left eye
H40.153	Residual stage of open-angle glaucoma, bilateral
H40.61X1	Glaucoma secondary to drugs, right eye, mild stage
H40.61X2	Glaucoma secondary to drugs, right eye, moderate stage
H40.61X3	Glaucoma secondary to drugs, right eye, severe stage
H40.62X1	Glaucoma secondary to drugs, left eye, mild stage
H40.62X2	Glaucoma secondary to drugs, left eye, moderate stage
H40.62X3	Glaucoma secondary to drugs, left eye, severe stage
H40.63X1	Glaucoma secondary to drugs, bilateral, mild stage
H40.63X2	Glaucoma secondary to drugs, bilateral, moderate stage
H40.63X3	Glaucoma secondary to drugs, bilateral, severe stage
Q15.0	Congenital glaucoma

Reviews, Revisions, and Approvals	Date	Approval Date
Annual Review	12/2019	12/2019
Converted to new template	05/2020	06/2020
Annual Review; Added CPT codes; Updated References	12/2020	12/2020
Annual Review; Updated References	12/2021	01/2022
Annual Review	11/2022	12/2022
Annual Review	11/2023	12/2023
Annual Review	11/2024	12/2024
Annual Review	08/2025	10/2025

References

1. American Academy of Ophthalmology, Preferred Practice Pattern® Guidelines, Primary Open-Angle Glaucoma, San Francisco, CA, American Academy of Ophthalmology, 2020, <https://www.aao.org/preferred-practice-pattern/primary-open-angle-glaucoma-ppp>
2. American Academy of Ophthalmology, Preferred Practice Pattern® Guidelines, Primary Open-Angle Glaucoma Suspect, San Francisco, CA, American Academy of Ophthalmology, 2020, <https://www.aao.org/preferred-practice-pattern/primary-open-angle-glaucoma-suspect-ppp>
3. Primary Selective Laser Trabeculoplasty for Open-Angle Glaucoma and Ocular Hypertension: Clinical Outcomes, Predictors of Success, and Safety from the Laser in Glaucoma and Ocular Hypertension Trial, Anurag Garg et al, American Journal of Ophthalmology, September 2019 Volume 126, Issue 9, Pages 1238–1248

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program

approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <https://www.cms.gov> for additional information.

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