
Medical Policy



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***Current Policy Effective Date: 5/1/18**
(See policy history boxes for previous effective dates)

Title: Posterior Capsulotomy after Cataract Surgery

Description / Background

In the majority of cases, cataract surgery involves removal of the cataract except for the retention of the posterior capsule, which is utilized to encase the intraocular lens (IOL) in a sutureless, secure position in the posterior chamber of the eye. The capsule also serves as a barrier to vitreous prolapse, a potential complication of the surgery.

Opacification (clouding) of the posterior capsule is a frequent consequence of cataract surgery. As the cloudiness increases, vision is adversely affected, and can lead to functional impairment. In the past, a more invasive method, discission, was performed to remove the opacity. It is now very rarely performed as a primary procedure. The most commonly used technique for treating posterior capsule opacification (PCO) is by neodymium:Yag laser (Nd:YAG) capsulotomy. The technique uses a laser to make an incision in the central part of the posterior lens to improve vision.

The Nd:YAG laser generates short pulse, low energy, high power, coherent optical radiation. When the laser output is combined with focusing optics, the high irradiance at the target causes tissue disruption via optical breakdown. A visible aiming system is utilized to target the invisible Nd:YAG laser radiation on or in close proximity to the target tissue.¹

The onset of PCO is variable, although it is uncommon for it to occur within the first three months of the cataract removal surgery. Occasionally, it will appear within six months, but most Nd:YAG capsulotomies are done within two years of the original surgery.

A posterior capsulotomy is not without risk. Complications of YAG capsulotomy include elevated intraocular pressure (IOP), corneal edema, cystoids macular edema, damage to the intraocular lens, decentration or dislocation of the intraocular lens, endothelial cell loss, hyphema, pupillary block, retinal detachment, uveitis, and vitreous prolapse among others.

Regulatory Status

The FDA Code of Federal Regulations (CFR) states the Nd:YAG laser for posterior capsulotomy and peripheral iridotomy has a Class II (special controls) designation, and the device design must emit a laser beam with the following parameters.

Wavelength = 1064 nanometers; spot size = 50 to 100 micros; pulse width = 3 to 30 nanoseconds; output energy per pulse = 0.5 to 15 millijoules (mJ); repetition rate = 1 to 10 pulses; and total energy = 20 to 120 mJ.

Medical Policy Statement

The safety and effectiveness of posterior capsulotomy utilizing an Nd: YAG laser have been established. It is a useful therapeutic option when used to correct functional impairment due to opacification following cataract surgery, in members meeting selection criteria.

Inclusionary and Exclusionary Guidelines (Clinically based guidelines that may support individual consideration and pre-authorization decisions)

Note: This policy does not address the need to evaluate and/or treat posterior segment pathology, or improve visualization of the posterior pole in other eye diseases

Inclusions:

For Nd: YAG laser posterior capsulotomy, after cataract removal in the same eye:

- When all of the following medical necessity criteria have been met:
 - The eye examination confirms that there is posterior capsular opacification; *and*
 - The visual impairment has interfered with the member's ability to carry out needed or desired activities, which is clearly documented in the patient's medical record; *and*
 - Other diseases (e.g., diabetic retinopathy, macular degeneration) have been excluded as the primary cause of the visual impairment; *and*
 - In the physician's estimation, significant improvement in visual function can be expected as a result of the surgery
- Additionally, the member must either have:
 - A best-corrected visual acuity (BCVA) of 20/50 or worse, at distance or near; *or*
 - A BCVA of 20/40 or better, and visual disability fluctuates as a result of symptoms of glare or decreased contrast, such as:
 - o Consensual light testing decreasing acuity of vision by two lines, *or*
 - Glare testing decreasing acuity of vision by two lines

Exclusions:

- Laser capsulotomy performed at the same time as cataract removal surgery
- Laser capsulotomy performed prophylactically

CPT / HCPCS Level II Codes (Note: The inclusion of a code in this list is not a guarantee of coverage. Please refer to the medical policy statement to determine the status of a given procedure.)

Established codes:

66820 66821

Other codes (investigational, not medically necessary, etc.):

N/A

Rationale

A search of literature through the PUBMED database and internet was completed, concluding in January 2017. The search strategy focused on the terms “posterior capsulotomy”, “post-cataract”, and “Nd: YAG laser, eye”.

Numerous medical journal articles, retrospective reviews, and websites representing and/or aiding the ophthalmologic professional community support the conclusion that opacification of the posterior capsule is the most frequent complication of cataract surgery. As cataract surgery is the leading procedure performed on the eye, it follows that posterior capsulotomy is also common; therefore representing a “considerable cost burden to national health care systems” (Awasthi et al). The prevention of unnecessary procedures by establishing reasonable guidelines consequently becomes a worthy endeavor.

In October of 1995, the *Federal Register* published findings regarding preoperative testing, cataract removal surgery, and post-operative issues in an effort to develop a national coverage policy. Referenced is, *Cataract in Adults: Management of Functional Impairment, Clinical Practice Guideline Number 4*, the Agency for Health Care Policy and Research’s (AHCPR) Publication Number 93-0542, February 1993. The *Clinical Practice Guideline* provides a list of indications for an Nd:YAG capsulotomy. Included are criteria that are objective: the surgeon must document the presence of a cataract, the impingement on the patient’s vision (visual acuity), and the environmental effects on vision (glare testing); and subjective: how the patient’s activities of daily living are compromised (they must be difficult to accomplish. Additionally, it recommends that the patient has been educated about the risks and benefits of surgery on the posterior capsule.

Government Regulations

National:

There is not a National Coverage Determination (NCD) for capsulotomy following cataract surgery.

Local:

Michigan does not have a Local Coverage Determination (LCD).

CGS’ LCD covering Kentucky and Ohio, *Capsule Opacification Following Cataract Surgery: Discission and YAG Laser Capsulotomy* (L33946), for services on or after 10/1/2015:

Indications:

Post-cataract surgery Nd:YAG laser capsulotomy is reasonable and medically necessary only to remedy a functional impairment due to opacification, to prevent possible intraocular damage from dislocation of the intraocular lens implant, or the need to evaluate and treat posterior segment pathology. The procedure will not be covered if it is performed or scheduled concurrently with cataract-removal surgery. Capsulotomy is covered when each of the following criteria are met and clearly documented:

- The patient has decreased ability to carry out activities of daily living including (but not limited to) reading, watching television, driving, or meeting occupational or a vocational expectations; and
- The patient has a best-corrected visual acuity of 20/50 or worse at distance or near; or additional testing shows one of the following:
 - o Consensual light testing decreases visual acuity by two lines, or
 - o Glare testing decreases visual acuity by two lines; and
- The patient has determined that he/she is no longer able to function adequately with the current level of visual function; and
- Other eye disease(s), including but not limited to macular degeneration or diabetic retinopathy, have been excluded as the primary cause of visual functional disability, except for the instance in which significant visual debility, in the judgement of the treating physician, is deemed secondary to ACO or PCO and laser treatment would provide the patient with improved functionality; and
- Physician concurrence with significant patient-defined improvement in visual function can be expected as a result of capsulotomy; and
- The patient has been educated about the risks and benefits of capsulotomy and the alternative(s) surgery (e.g., the avoidance of glare, use of optimal eyeglasses prescription, etc.); and
- The patient has undergone an appropriate preoperative ophthalmologic evaluation.

Michigan Department of Health & Human Services:

N/A

(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicare Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)

Related Policies

Cataract Removal Surgery

References

1. Agrawal G: Visual outcome and complications of neodymium: yttrium aluminium garnet laser posterior capsulotomy. Int J Cur Res Rev | Vol 7 • Issue 10 • May 2015 pp. 39-42

2. Awasthi, N., PhD.; Guo, S., M.D.; Wagner, B.J., PhD; Posterior capsule opacification- a problem reduced but not yet eradicated. 2009.3.archophthalmol/10.1001:doi (viewed 1/23/2017) <http://jamanetwork.com/journals/jamaophthalmology/fullarticle/422987>
3. CGS Administrators, LLC- LCD. Capsule opacification following cataract surgery: discission and YAG laser capsulotomy (L33946) Updated on 10/31/2016 with effective dates 10/01/2015
4. Federal Register. Medicare: Cataract surgery; coverage limitations. Vol. 60 No. 194 Oct 6, 1995 p 52396
5. Kim JS, Park JS. Long-term follow-up of adverse consequences after Nd:YAG laser treatment for posterior capsular opacification. J Korean Ophthalmol Soc. 2015 Nov;56(11):1706-1711. <https://doi.org/10.3341/jkos.2015.56.11.1706>
6. Min JK, An JH, Yim JH. A new technique for Nd:YAG laser posterior capsulotomy. *International Journal of Ophthalmology*. 2014;7(2):345-349. doi:10.3980/j.issn.2222-3959.2014.02.28. (viewed 1/23/2017) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4003095/>

The articles reviewed in this research include those obtained in an Internet based literature search for relevant medical references through January 2018, the date the research was completed.

Joint BCBSM/BCN Medical Policy History

Policy Effective Date	BCBSM Signature Date	BCN Signature Date	Comments
5/1/17	3/8/17	2/28/17	Joint policy established
5/1/18	2/20/18	2/20/18	Routine policy maintenance. Recommended retirement.

Next Review Date: This is an established policy and no longer subject to routine review.

Pre-Consolidation Medical Policy History

Original Policy Date	Comments
BCN: N/A	Revised: N/A
BCBSM: N/A	Revised: N/A

BLUE CARE NETWORK BENEFIT COVERAGE
POLICY: POSTERIOR CAPSULOTOMY AFTER CATARACT SURGERY

I. Coverage Determination:

Commercial HMO (includes Self-Funded groups unless otherwise specified)	Covered, policy guidelines apply
BCNA (Medicare Advantage)	Covered, policy guidelines apply
BCN65 (Medicare Complementary)	Coinsurance covered if primary Medicare covers the service.

II. Administrative Guidelines:

- The member's contract must be active at the time the service is rendered.
- Coverage is based on each member's certificate and is not guaranteed. Please consult the individual member's certificate for details. Additional information regarding coverage or benefits may also be obtained through customer or provider inquiry services at BCN.
- The service must be authorized by the member's PCP except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Services must be performed by a BCN-contracted provider, if available, except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Payment is based on BCN payment rules, individual certificate and certificate riders.
- Appropriate copayments will apply. Refer to certificate and applicable riders for detailed information.
- CPT - HCPCS codes are used for descriptive purposes only and are not a guarantee of coverage.