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## Subject: Laser Vitreolysis

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### DESCRIPTION:

Vitreous [floaters](#) are microscopic collagen fibers within the vitreous that tend to clump and cast shadows on the retina, appearing as floaters. The most common cause of vitreous floaters in ophthalmology is posterior vitreous detachment (PVD), a separation of the posterior hyaloid face from the retina. Often this condition is not visually threatening. The etiology of a vitreous floater is due to vitreous syneresis (liquefaction) and contraction with age.

The use of laser vitreolysis as a procedure for treatment of vitreous floaters is not widely practiced. The procedure has limitations due to the fact that the floaters must be visualized to be targeted by photo-emulsification and small floaters or floaters close to the [retina](#) may remain after treatment or be untreatable. For this reason, the treatment may decrease the number of floaters, but not eliminate them completely.

**Summary and Analysis of Evidence:** Levy-Clarke et al (2025) evaluated the incidence of visually significant posterior capsule opacification (PCO with visual acuity  $\leq 20/50$ ) and the incidence of Nd:YAG laser capsulotomy in the year following cataract surgery for uveitic eyes. Among 1,855 uveitic eyes of 1,370 patients who had undergone cataract surgery, visually significant PCO occurred in 297 eyes (16%), and YAG laser capsulotomy was done in 407 eyes (22%) within the first year following surgery. The authors concluded “vision-reducing ( $\leq 20/50$ ) PCO is common, occurring in about one sixth of uveitic eyes within 1 year of cataract surgery; a higher number (22%) of eyes underwent YAG laser capsulotomy within the first year. Age and postoperative inflammation following cataract surgery are the variables most associated with the incidence of visually significant PCO and YAG laser capsulotomy.” Aleman et al (2024) stated “symptoms of vitreous floaters may be mild or may significantly affect patient quality of life. Observation is the most common management strategy. Procedural management options include pars plana vitrectomy (PPV) and neodymium-doped yttrium aluminium garnet (Nd:YAG) vitreolysis. PPV is considered the most definitive management option for vitreous floaters. PPV, however, carries

inherent risks, notably infection, cataract formation, and retinal detachment . Nd:YAG laser vitreolysis is a less invasive alternative with studies demonstrating varied success.” Kim et al (2018) investigated the effects and safety of (Nd:YAG) laser posterior capsulotomy with vitreous strand cutting for treatment of symptomatic posterior capsular opacity (PCO). The authors found that modified round pattern Nd:YAG laser posterior capsulotomy is an effective and safe method for the treatment of PCO, as compared with vitreous strand cutting. The American Academy of Ophthalmology in their statements regarding Nd:YAG photodisruptors (1993), stated “The Nd:YAG laser surgery can cut lens capsule, vitreous and capsular membranes, strands, and adhesions, and the iris within the surgically unopened eye, thereby avoiding or minimizing infection, wound leaks, and other complications of conventional intraocular surgery. The technique has found its most widespread use in performing posterior capsulotomies after extracapsular cataract surgery. It has an extremely low complication rate when used in the anterior segment and is a preferred alternative to surgical discission.” Lin et al (2022) conducted a prospective cohort study to evaluate and compare the efficacy and safety of YAG laser vitreolysis in treating symptomatic vitreous floaters of complete posterior vitreous detachment (PVD) and non-PVD. 51 eyes with symptomatic floaters were treated with YAG laser vitreolysis. Improved subjective and objective visual quality in participants with symptomatic floaters following YAG laser vitreolysis was found in both groups. The efficacy of YAG laser vitreolysis was comparable in floaters of complete PVD and non-PVD types. However, the authors noted several limitations in their study, including its small sample size, open design and short follow-up period, as well as being a single center study and having no control group. They stated “(w)hether YAG laser vitreolysis is ready for primary symptomatic floaters is still under debate. Though the history of YAG laser vitreolysis for floaters is nearly 30 years, there are still limited studies reporting the efficacy of this treatment. Kokavec et al (2017) conducted a search for randomized controlled trials (RCTs) to compare the effectiveness and safety of Nd:YAG laser vitreolysis to pars plana vitrectomy for symptomatic vitreous floaters. No RCTs that compare Nd:YAG laser vitreolysis with pars plana vitrectomy for the treatment of symptomatic floaters were found. The authors concluded “(p)roperly designed RCTs are needed to evaluate the treatment outcomes from the interventions described. We recommend future studies randomise participants to either a Nd:YAG laser vitreolysis group or a vitrectomy group, with participants in each group assigned to either receive treatment or a sham intervention. Future studies should follow participants at six months and 12 months after the intervention.”

## POSITION STATEMENT:

Laser treatment of vitreous strands, vitreous face adhesions, sheets, membranes, or opacities **meets the definition of medical necessity** when indicated to treat a condition arising from an otherwise covered eye procedure (e.g., cataract surgery).

Laser vitreolysis is considered **experimental or investigational**, for treatment of all other indications, and specifically vitreous floaters of the eye, as there is insufficient clinical evidence in the published peer-reviewed literature to support effectiveness.

## BILLING/CODING INFORMATION:

### CPT Coding:

67031	Severing of vitreous strands, vitreous face adhesions, sheets, membranes or opacities, laser surgery (1 or more stages)
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## REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

## PROGRAM EXCEPTIONS:

**Federal Employee Program (FEP):** Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

**Medicare Advantage products:** The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Laser Procedures (140.5), located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at [Coverage Protocol Exemption Request](#).

## DEFINITIONS:

**Floater:** A small opacity above the retina that casts a shadow significant enough to be detected subjectively as a spot or spots that move in the field of vision.

**Retina:** The sensory membrane that lines most of the large posterior chamber of the vertebrate eye, is composed of several layers including one containing the rods and cones, and functions as the immediate instrument of vision by receiving the image formed by the lens and converting it into signals which reach the brain via the optic nerve.

## RELATED GUIDELINES:

None applicable.

## OTHER:

None applicable.

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## COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 04/24/25.

## GUIDELINE UPDATE INFORMATION:

11/15/09	New Medical Coverage Guideline.
10/15/11	Scheduled review; position statement unchanged. References updated.
10/15/12	Scheduled review. Maintained position statement; revised description and definitions; updated references and reformatted guideline.
05/11/14	Revision: Program Exceptions section updated.
09/15/19	Scheduled review. Maintained position statement. Revised Medicare Advantage program exception and updated references.
02/15/21	Scheduled review. Revised description, maintained position statement, and updated references.
10/15/22	Scheduled review. Maintained position statement and updated references.
08/21/23	Update to Program Exceptions section.
05/15/24	Position statements maintained.
06/15/24	Revised description and updated references.
05/15/25	Scheduled review. Revised description, maintained position statement and updated references.