

Policy Name	Clinical Policy – Laser Photocoagulation and Cryotherapy of the Retina and Choroid
Policy Number	1326.00
Department	Clinical Product & Strategy
Subcategory	Medical Management
Original Approval Date	05/01/2018
Current CCO/MPC Approval Date	07/12/2023
Current Effective Date	10/01/2023

Company Entities Supported (Select All that Apply) _X_ Superior Vision Benefit Management _X_ Superior Vision Services _X_ Superior Vision of New Jersey, Inc.

- _X_ Block Vision of Texas, Inc. d/b/a Superior Vision of Texas _X_ Davis Vision
- (Collectively referred to as 'Versant Health' or 'the Company'

ACRONYMS	
AMD	Age Related Macular Degeneration
BVO	Branch Vein Occlusion
CME	Cystoid Macula Edema
CNVM	Choroidal Neovascular Membrane
CVO	Central Vein Occlusion
DME	Diabetic Macula Edema
FA	Fluorescein Angiogram
NPDR	Non-Proliferative Diabetic Retinopathy
OCT	Optical Coherence Tomography
OPT	Ocular Photodynamic Therapy
PDR	Proliferative Diabetic Retinopathy
PRC	Pan retinal Cryotherapy
PRP	Pan retinal Photocoagulation
RD	Retinal detachment
RI	Rubeosis Iridis
ROP	Retinopathy of Prematurity
TTT	Trans pupillary thermotherapy



PURPOSE

To provide the medical necessity criteria to support the indications for laser photocoagulation and cryotherapy of the retina and choroid procedures. Applicable procedure codes are also defined.

POLICY

A. BACKGROUND

This policy does not apply to children one year or less with diagnoses of Retinopathy of Prematurity.

Laser treatment of the retina and choroid is an effective treatment for certain disorders of the eye to prevent vision loss and/or improve vision. While commonly used in diabetic eye disease, other ophthalmic conditions may benefit from laser photocoagulation including macular edema (in branch or central vein occlusions), central serous chorioretinopathy, retinal holes, retinal tears, retinal detachments, and tumors of the retina or choroid. Infrequently, laser photocoagulation is used to treat exudative macular degeneration. In some ophthalmic conditions retinal cryotherapy may also be used.

B. Medically Necessary

1. Pan retinal Photocoagulation or Cryotherapy

Pan retinal photocoagulation and cryotherapy may be medically necessary for the treatment of proliferative retinopathy, pre-proliferative retinopathy, and related etiologies of retinovitreal neovascularization

2. Focal Laser Treatment of Localized Lesion

Focal laser treatments may be medically necessary for the following localized lesions and conditions:

- a. Localized lesions of the retina or choroid (e.g., choroidal neovascularization, macro aneurysm, retinal or choroidal tumors, central serous choroidopathy).
- b. Macular edema from retinal vein occlusion and diabetic retinopathy
- c. Retinal holes at risk to progressing to retinal detachment
- d. Prophylaxis for retinal detachment



3. Trans pupillary thermotherapy (TTT)

Trans pupillary thermotherapy (TTT) may be medically necessary for either of the following indications:

- a. Retinoblastoma involving less than 50% of the retina, and without associated vitreal or subretinal seeds at the time of thermotherapy; or,
- b. Small (2-3 mm) choroidal melanomas in the posterior globe.
- c. Choroidal vascular tumors less than or equal to 4 mm
- d. Other primary retinal or choroidal tumors

D. Documentation

Medical necessity is supported by adequate and complete documentation in the patient's medical record that describes the procedure and the medical rationale. Documentation requires at a minimum all the following items. For retrospective reviews, the full operative report ande medical care plan is required.

All items must be available upon request to initiate or sustain previous payments. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, date(s) of service). The physician must authenticate all services ordered and provided using handwritten or electronic signature. Stamped signatures are not acceptable.

- 1. The current and most recent clinical records include:
 - a. A complete examination of the eye with dilated pupils that includes but:
 - i. An examination of the anterior segment and posterior segment with documented pertinent findings; and,
 - ii. the interpretation and report from the most recent and previous tests performed including B-scan, OCT, and FA, where indicated; and,
 - iii. the covered condition, the need for the treatment contemplated, and the absence of contraindications for the surgery; and,
 - b. Other allied diagnostic testing supportive of the treatment plan with physician's order, medical rationale, findings, interpretation, and report; and,
 - c. Use of a laser that is FDA approved for the procedure; and,
- 2. Documentation, including dates, and outcomes of the preceding retinal laser photocoagulation performed to either the right and or left eye; and,
- 3. The detailed operative report should be provided upon request. The operative report should include the procedure description including wavelength, duration, energy and number of applications of laser for the patient's specific indications.



E. Procedural Detail

CPT Code	8
67101	Repair of retinal detachment, including drainage of subretinal fluid, when performed; cryotherapy
67105	Repair of retinal detachment, including drainage of subretinal fluid when performed; photocoagulation
67141	Prophylaxis of retinal detachment (e.g., retinal break, lattice degeneration) without drainage, 1 or more sessions; cryotherapy, diathermy
67145	Prophylaxis of retinal detachment (e.g., retinal break, lattice degeneration) without drainage, 1 or more sessions; photocoagulation
67208	Destruction of localized lesion of retina (e.g., macular edema, tumors), 1 or more sessions; cryotherapy, diathermy
67210	Destruction of localized lesion of retina (e.g., macular edema, tumors), one or more sessions; photocoagulation
67218	Destruction of localized lesion of retina (e.g., macular edema, tumors), 1 or more sessions; radiation by implantation of source (includes removal of source)
67220	Destruction of localized lesion of choroid (e.g., choroidal neovascularization); photocoagulation (e.g., laser), one or more sessions
67227	Destruction of extensive or progressive retinopathy (e.g., diabetic retinopathy), cryotherapy, diathermy
67228	Treatment of extensive or progressive retinopathy (e.g., diabetic retinopathy), photocoagulation
67299	Unlisted posterior segment procedure
G0186	Destruction of localized lesion of choroid (for example, choroidal neovascularization); photocoagulation, feeder vessel technique (one or more sessions)
Modifiers	
50	Bilateral procedure
57	Decision for surgery. Always appended to the appropriate level of exam when performed within three days preceding surgery.

DISCLAIMER AND COPYRIGHTS

This policy is provided for information purposes only and does not constitute medical advice. Versant Health, Inc., and its affiliates (the "Company") do not provide health care services and cannot guarantee any results or outcomes. Treating doctors are solely responsible for determining what services or treatments to provide to their patients. Patients (members) should always consult their doctor before making any decisions about medical care.



Subject to applicable law, compliance with this clinical policy is not a guarantee of coverage or payment. Coverage is based on the terms of an individual's particular benefit plan document, which may not cover the service(s) or procedure(s) addressed in this clinical policy. The terms of the individual's specific benefit plan are always determinative. Every effort has been made to ensure that the information in this clinical policy is accurate and complete, however the Company does not guarantee that there are no errors in this policy or that the display of this file on a website is without error. The company and its employees are not liable for any errors, omissions, or other inaccuracies in the information, product, or processes disclosed. Neither the Company nor the employees represent that the use of such information, product, or processes will not infringe on privately owned rights. In no event shall the Company be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of such information, product, or processe.

COMPANY'S COPYRIGHT STATEMENT

Except for any copyrights described below, this clinical policy is confidential and proprietary, and no part of this clinical policy may be copied without Versant Health, or its applicable affiliates expressing prior written approval.

AMA COPYRIGHT STATEMENT

CPT[©] 2002-2023 is the copyright of the American Medical Association. All Rights Reserved. CPT[™] is a registered trademark of the American Medical Association. Applicable FARS/DFARS Apply to Government Use. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

RELATED POLICIES AND PROCEDURES		
1305	YAG Capsulotomy	
1317	Intravitreal Injections	
1345	Verteporfin (Visudyne)	

DOCUMENT HISTORY				
Approval Date	Revisions	Effective Date		
05/01/2018	Initial policy	05/01/2018		
07/25/2019	Code additions; no substantive criteria change	08/01/2019		
12/18/2019	No substantive criteria change	01/01/2020		
06/03/2020	Removed indications for pediatric retinopathy of prematurity.	12/01/2020		
01/06/2021	Removed criteria for A-VEGF therapy as a pre- requisite treatment for diabetic macular edema.	07/01/2021		



10/06/2021	Added indication pre-proliferative retinopathy to B.1. criteria for Pan retinal Photocoagulation And. Pan retinal Cryotherapy; removed extraneous diagnoses (variations of neovascularization) from B.1. criteria for Pan Retinal Photocoagulation and Pan Retinal Cryotherapy; improved wording for indications for B.2. Focal Laser Treatment of Localized Lesion; removed entirety of criteria for B.2. Ocular Photodynamic, as redundant of policy 1345; Removed extraneous listings in D. Documentation requirements. Added CPT code 67229, deleted CPT codes J3396, 67221, and 67225 which are in policy 1345.	04/01/2022
07/06/2022	Criteria for photocoagulation and cryotherapy rewritten for retinovitreal neovascularization. Criteria for focal laser specifies macular edema from retinal vein occlusion and diabetic retinopathy.	01/01/2023
07/12/2023	Add indication of primary retinal or choroidal tumors to TTT procedure; remove required measure of spot size.	10/01/2023

REFERENCES

- 1. Aaberg TM Jr, Bergstrom CS, Hickner ZJ, et.al. Long-term results of primary trans pupillary thermal therapy for the treatment of choroidal malignant melanoma. *Br J Ophthalmol*. 2008; 92(6):741-746.
- Bressler NM, Beck RW, Ferris FL 3rd. Panretinal photocoagulation for proliferative diabetic retinopathy. N Engl J Med. 2011 Oct 20;365(16):1520-6. doi: 10.1056/NEJMct0908432. PMID: 22010918.
- 3. Browning DJ, Stewart MW, Lee C. Diabetic macular edema: Evidence-based management. Indian J Ophthalmol. 2018 Dec;66(12):1736-1750. doi: 10.4103/ijo.IJO_1240_18. PMID: 30451174; PMCID: PMC6256891.
- Editor. The Diabetic Retinopathy Study Research Group. Photocoagulation treatment of proliferative diabetic retinopathy. Clinical application of Diabetic Retinopathy Study (DRS) findings, DRS Report Number 8. Ophthalmology. 1981;88(7):583–600.
- 5. El Rami H, Barham R, Sun JK, et.al. Evidence-Based Treatment of Diabetic Retinopathy. Semin Ophthalmol. 2017;32(1):67-74. doi: 10.1080/08820538.2016.1228397. Epub 2016 Oct 4. PMID: 27700224.
- Ellis MP, Lent-Schochet D, Lo T, et.al. Emerging Concepts in the Treatment of Diabetic Retinopathy. Curr Diab Rep. 2019 Nov 20;19(11):137. doi: 10.1007/s11892-019-1276-5. PMID: 31748965.
- Everett LA, Paulus YM. Laser Therapy in the Treatment of Diabetic Retinopathy and Diabetic Macular Edema. Curr Diab Rep. 2021 Sep 6;21(9):35. doi: 10.1007/s11892-021-01403-6. PMID: 34487257; PMCID: PMC8420141.



- Giacuzzo C, Bergin C, Potic J, et al. Evolution and Patterns of Chorodal Thickness Changes in Rhegmatogenous Retinal Detachment. Retina. 2020 Jan;40(1):47-55. doi: 10.1097/IAE.00000000002345. PMID: 30308562; PMCID: PMC6924946.
- Gross JG, Glassman AR, Jampol LM, et.al. Panretinal Photocoagulation vs Intravitreous Ranibizumab for Proliferative Diabetic Retinopathy: A Randomized Clinical Trial. JAMA. 2015 Nov 24;314(20):2137-2146. doi: 10.1001/jama.2015.15217. Erratum in: JAMA. 2016 Mar 1;315(9):944. Erratum in: JAMA. 2019 Mar 12;321(10):1008. PMID: 26565927; PMCID: PMC5567801.
- 10. Gupta MR, Chan RV P, Anzures R, et.al. Practice Patterns in Retinopathy of Prematurity Treatment for Disease milder than Recommended by Guidelines. Am J Ophthalmol; 163: 1-10; Mar 2016.
- 11. Hayreh SS. Photocoagulation for retinal vein occlusion. Prog Retin Eye Res. 2021 Nov; 85:100964. doi: 10.1016/j.preteyeres.2021.100964. Epub 2021 Mar 11. PMID: 33713810.
- Hughes D, Nair S, Harvey JN. Determining diabetic retinopathy screening interval based on time from no retinopathy to laser therapy. J Med Screen. 2017 Dec;24(4):170-175. doi: 10.1177/0969141316672687. Epub 2016 Nov 3. PMID: 27810985.
- 13. Jefferies, Ann L. Retinopathy of prematurity: An update on screening and management, Pediatr Child Health, Mar 2016; 21 (2): 101-104 doi 10.1093/pch/21.2.101.
- Jeong SH, Han JI, Cho SW, et.al. Effect of focal laser photocoagulation in eyes with mild to moderate non-proliferative diabetic retinopathy. Int J Ophthalmol. 2016 Oct 18;9(10):1439-1443. doi: 10.18240/ijo.2016.10.12. PMID: 27803861; PMCID: PMC5075659.
- Moutray T, Evans JR, Lois N, et.al. Different lasers and techniques for proliferative diabetic retinopathy. Cochrane Database Syst Rev. 2018 Mar 15;3(3):CD012314. doi: 10.1002/14651858.CD012314.pub2. PMID: 29543992; PMCID: PMC6494342.
- Němčanský J, Stepanov A, Němčanská S, et.al. Results of Treatment of Diabetic Retinopathy by the Laser System PASCAL. Cesk Slov Oftalmol. 2018 Spring;73(5-6):198-203. English. PMID: 30541300.
- Nozaki M, Kato A, Yasukawa T, et.al. Indocyanine green angiography-guided focal navigated laser photocoagulation for diabetic macular edema. Jpn J Ophthalmol. 2019 May;63(3):243-254. doi: 10.1007/s10384-019-00662-x. Epub 2019 Feb 26. PMID: 30806869.
- Peto T, Chakravarthy U. New Findings from Diabetic Retinopathy Clinical Research Retina Network Protocol V Confirm a Role for Focal Laser Photocoagulation or Observation for Eyes with Center-Involved Diabetic Macular Edema and Good Visual Acuity: New Is Not Always Best. JAMA Ophthalmol. 2019 Jul 1;137(7):838-839. doi: 10.1001/jamaophthalmol.2019.1876. PMID: 31037285.
- Reddy SV, Husain D. Panretinal Photocoagulation: A Review of Complications. Semin Ophthalmol. 2018;33(1):83-88. doi: 10.1080/08820538.2017.1353820. Epub 2017 Nov 27. PMID: 29172937.
- 20. Relhan N, Flynn HW Jr. The Early Treatment Diabetic Retinopathy Study historical review and relevance to today's management of diabetic macular edema. Curr Opin Ophthalmol. 2017 May;28(3):205-212. doi: 10.1097/ICU.00000000000362. PMID: 28151747.
- Royle P, Mistry H, Auguste P, et.al. Pan-retinal photocoagulation and other forms of laser treatment and drug therapies for non-proliferative diabetic retinopathy: systematic review and economic evaluation. Health Technol Assess. 2015 Jul;19(51): v-xxviii, 1-247. doi: 10.3310/hta19510. PMID: 26173799; PMCID: PMC4780877.



- 22. Shields CL, Shields JA, Cater J, et al. Trans pupillary thermotherapy for choroidal melanoma: Tumor control and visual results in 100 consecutive cases. *Ophthalmology*. 1998; 105(4):581-590.
- 23. Shields CL, Shields JA, DePotter P, et al. Trans pupillary thermotherapy in the management of choroidal melanoma. *Ophthalmology*. 1996; 103(10):1642-1650.
- 24. Vandefonteyne S, Caujolle JP, Rosier L, et.al. Diagnosis and treatment of peripheral exudative haemorrhagic chorioretinopathy. Br J Ophthalmol. 2020 Jun;104(6):874-878. doi: 10.1136/bjophthalmol-2018-313307. Epub 2019 Oct 23. PMID: 31645320.
- 25. Verdaguer J, Vaisman M. Treatment of symptomatic retinal breaks. Am J Ophthalmol. 1979; 87:783-8.
- 26. Vernon. SA, Cheng H; Pan retinal cryotherapy in neovascular disease; BMJ 1988 volume 72, issue 6. http://dx.doi.org/10.1136/bjo.72.6.401.
- Wang W, Lo ACY. Diabetic Retinopathy: Pathophysiology and Treatments. Int J Mol Sci. 2018 Jun 20;19(6):1816. doi: 10.3390/ijms19061816. PMID: 29925789; PMCID: PMC6032159.
- Wiley HE, Krivosic V, Gaudric A, et.al. Management of retinal hemangioblastoma in von hippel-lindau disease. Retina. 2019 Dec;39(12):2254-2263. Doi: 10.1097/IAE.00000000002572. PMID: 31259811; PMCID: PMC6878154.
- 29. Yun SH, Adelman RA. Recent developments in laser treatment of diabetic retinopathy. Middle East Afr J Ophthalmol. 2015 Apr-Jun;22(2):157-63. doi: 10.4103/0974-9233.150633. PMID: 25949072; PMCID: PMC4411611.

SOURCES

American Academy of Ophthalmology. Preferred Practice Patterns, for:

- Idiopathic Macular Hole, PPP 2019.
- Age-Related Macular Degeneration, 2019
- Comprehensive Adult Medical Eye Evaluation, 2020.
- Diabetic Retinopathy, 2019
- Posterior Vitreous Detachment, Retinal Breaks, and Lattice Degeneration, 2019
- Retina and Ophthalmic Artery Occlusions, 2019
- Retinal Vein Occlusions, 2019