



Geisinger Health Plan Policies and Procedure Manual

Policy: MP124

Section: Medical Benefit Policy

Subject: Transpupillary Thermotherapy

Applicable Lines of Business

Commercial	X	CHIP	X
Medicare	X	ACA	X
Medicaid	X		

I. Policy: Transpupillary Thermotherapy

II. Purpose/Objective:

To provide a policy of coverage regarding Transpupillary Thermotherapy

III. Responsibility:

- A. Medical Directors
- B. Medical Management

IV. Required Definitions

1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions

Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

- a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
- b. provided for the diagnosis, and the direct care and treatment of the Member's condition, illness disease or injury;
- c. in accordance with current standards of good medical treatment practiced by the general medical community.
- d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and
- e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment

Medically Necessary — A service, item, procedure, or level of care that is necessary for the proper treatment or management of an illness, injury, or disability is one that:

- Will, or is reasonably expected to, prevent the onset of an illness, condition, injury or disability.
- Will, or is reasonably expected to, reduce or ameliorate the physical, mental or developmental effects of an illness, condition, injury or disability.

- Will assist the Member to achieve or maintain maximum functional capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for Members of the same age

DESCRIPTION:

Transpupillary thermotherapy (TTT) involves the use of an infrared laser as a treatment to destroy intraocular tumors or to treat and prevent inappropriate new blood vessel growth in the eye due to age-related macular degeneration.

INDICATIONS: Transpupillary thermotherapy may be considered medically necessary for the treatment of:

- Small (less than 3 mm) choroidal melanoma located posterior to the globe
- Retinoblastoma without evidence of intravitreal or subretinal tumor seeds

EXCLUSIONS: There is insufficient evidence in the published, peer-reviewed medical literature to support the efficacy of this treatment for Exudative (wet) Choroidal neovascularization due to age-related macular degeneration is considered **Experimental, Investigational, or Unproven** and is **NOT COVERED**, except for lines of business for which coverage may be mandated.

Note: A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in MP 15 - Experimental Investigational or Unproven Services or Treatment.

Medicaid Business Segment:

Any requests for services, that do not meet criteria set in the PARP, may be evaluated on a case by case basis

CODING ASSOCIATED WITH: Transpupillary Thermotherapy

The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at www.cms.gov or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.

67299 unlisted procedure, posterior segment
92499 Unlisted ophthalmological service or procedure

Current Procedural Terminology (CPT®) © American Medical Association: Chicago, IL

LINE OF BUSINESS:

Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD's and NCD's will supercede this policy. For PA Medicaid Business segment, this policy applies as written.

REFERENCES:

Winifred S. Hayes, Hayes Inc. Online, Transpupillary Thermotherapy for Choroidal Tumors and Macular Degeneration. Sept. 2002. Update 11/3/03. Update 11/21/04 Archived 2008

ECRI, HTAIS Hotline Response, Transpupillary Thermotherapy (TTT) for Treatment of Classic and Occult Choroidal Neovascularization. Jan. 15, 2003.

Shields CL, Shields JA. Transpupillary thermotherapy for choroidal melanoma. Curr Opin Ophthalmol. 1999 Jun;10(3):197-203

Shields CL, Shields JA, Perez N, Singh AD, Cater J. Primary transpupillary thermotherapy for small choroidal melanoma in 256 consecutive cases: outcomes and limitations. Ophthalmology. 2002 Feb;109(2):225-34.

Harbour JW, Meredith TA, Thompson PA, Gordon ME. Transpupillary thermotherapy versus plaque radiotherapy for suspected choroidal melanomas. Ophthalmology. 2003 Nov;110(11):2207-14

Stoffelns BM, Schoepfer K, Jochem T, Faldum A. Tumor regression in malignant choroidal melanomas after transpupillary thermotherapy (TTT) versus ruthenium brachytherapy and sandwich therapy - a comparative analysis. Klin Monbl Augenheilkd. 2010 Apr;227(4):262-8

Parrozzani R, Boccassini B, De Belvis V, Radin PP, Midena E. Long-term outcome of transpupillary thermotherapy as primary treatment of selected choroidal melanoma. *Acta Ophthalmol.* 2009 Nov;87(7):789-92

Chojniak MM, Chojniak R, Nishimoto IN, Allemann N, Erwenne CM. Primary transpupillary thermotherapy for small choroidal melanoma. *Graefes Arch Clin Exp Ophthalmol.* 2011 Dec;249(12):1859-65

Pilotto E, Vujosevic S, De Belvis V, Parrozzani R, Boccassini B, Midena E. Long-term choroidal vascular changes after iodine brachytherapy versus transpupillary thermotherapy for choroidal melanoma. *Eur J Ophthalmol.* 2009 Jul-Aug;19(4):646-53.

Abramson DH, Scheffler AC. Transpupillary thermotherapy as initial treatment for small intraocular retinoblastoma: technique and predictors of success. *Ophthalmology.* 2004 May;111(5):984-91

National Cancer Institute (NCI). Retinoblastoma (PDQ). Updated January 25, 2018.
<http://www.cancer.gov/cancertopics/pdq/treatment/retinoblastoma/HealthProfessional/page5>

National Cancer Institute (NCI). Intraocular(Eye) Melanoma Treatment (PDQ). Small Choroidal Melanoma. Updated December 2007. <http://www.cancer.gov/cancertopics/pdq/treatment/intraocularmelanoma/HealthProfessional/page6>

Desjardins L, Lumbroso-Le Rouic L, Levy-Gabriel C et al. Combined proton beam radiotherapy and transpupillary thermotherapy for large uveal melanomas: a randomized study of 151 patients. *Ophthalmic Res.* 2006;38(5):255-60.

Gündüz K, Kurt RA, Akmeşe HE, et al. Ruthenium-106 plaque radiotherapy alone or in combination with transpupillary thermotherapy in the management of choroidal melanoma. *Jpn J Ophthalmol.* 2010 Jul;54(4):338-343.

Sagoo MS, Shields CL, Mashayekhi A, et al. Plaque Radiotherapy for Juxtapapillary Choroidal Melanoma Tumor Control in 650 Consecutive Cases. *Ophthalmology.* 2010 Aug 31

Shields CL, Cater J, Shields JA, et al. Combined plaque radiotherapy and transpupillary thermotherapy for choroidal melanoma: tumor control and treatment complications in 270 consecutive patients. *Arch Ophthalmol.* 2002a Jul;120(7):933-40.

Shields CL, Shields JA, Cater J, et al. Transpupillary thermotherapy for choroidal melanoma: tumor control and visual results in 100 consecutive cases. *Ophthalmology.* 1998 Apr;105(4):581-90.

Aaberg TM Jr, Bergstrom CS, Hickner ZJ, Lynn MJ. Long-term results of primary transpupillary thermal therapy for the treatment of choroidal malignant melanoma. *Br J Ophthalmol.* 2008 Jun;92(6):741-6.

Bartlema YM, Oosterhuis JA, de Korver J, et al. Combined plaque radiotherapy and transpupillary thermotherapy in choroidal melanoma: 5 years' experience. *Br J Ophthalmol.* 2003;87:1370-1373.

Godfrey DG, Waldron RG, Capone A Jr: Transpupillary thermotherapy for small choroidal melanoma. *Am J Ophthalmol* 1999;128(1):88-93.

Robertson DM, Buettner H, Bennett SR: Transpupillary thermotherapy as primary treatment for small choroidal melanomas. *Arch Ophthalmol* 1999;117(11):1512-9.

American Academy of Ophthalmology. ONE® Network. Transpupillary Thermotherapy. Available at:
<http://one.aao.org/bcscsnippetdetail.aspx?id=c93a650a-32bd-404d-884e-73af80590490>
Accessed May 2016.

American Academy of Ophthalmology. Preferred practice pattern Guidelines. Age-related macular degeneration. 2015. Available at: <http://one.aao.org/guidelines-browse?filter=preferredpracticepatterns>
Accessed May 2016.

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Uveal Melanoma. V2.2022

Souto EB, Zielinska A, Luis M, et al. Uveal melanoma: Physiopathology and new in situ-specific therapies. *Cancer Chemother Pharmacol.* 2019;84(1):15-32.

Russo, I., Levy-Gabriel, C., Dupont, A., Rouic, L, Cassoux, N., Desjardins, L., et al. Prospective phase II study of children affected by bilateral intraocular retinoblastoma with macular involvement of both eyes or in the only preserved eye. Macular tumor control, eye preservation rate, and visual outcome. *Pediatric Blood & Cancer* 2020; 68 (1), e28721

Hajjaj A, van Overdam KA, Gishti O, et al. Efficacy and safety of current treatment options for peripheral retinal haemangioblastomas: A systematic review. *Acta Ophthalmol.* 2022;100(1):e38-e46.

This policy will be revised as necessary and reviewed no less than annually.

Devised: 2/04

Revised: 6/12 (added indications)

Reviewed: 2/05, 2/06; 2/07; 2/08; 2/09; 2/10; 2/11, 2/12, 6/13, 6/14, 6/15, 6/16, 5/17, 5/18, 5/19, 5/20, 5/21, 5/22, 5/23

Geisinger Health Plan may refer collectively to health care coverage sponsors Geisinger Health Plan, Geisinger Quality Options, Inc., and Geisinger Indemnity Insurance Company, unless otherwise noted. Geisinger Health Plan is part of Geisinger, an integrated health care delivery and coverage organization.

Coverage for experimental or investigational treatments, services and procedures is specifically excluded under the member's certificate with Geisinger Health Plan. Unproven services outside of an approved clinical trial are also specifically excluded under the member's certificate with Geisinger Health Plan. This policy does not expand coverage to services or items specifically excluded from coverage in the member's certificate with Geisinger Health Plan. Additional information can be found in MP015 Experimental, Investigational or Unproven Services.

Prior authorization and/or pre-certification requirements for services or items may apply. Pre-certification lists may be found in the member's contract specific benefit document. Prior authorization requirements can be found at <https://www.geisinger.org/health-plan/providers/ghp-clinical-policies>

Please be advised that the use of the logos, service marks or names of Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company on a marketing, press releases or any communication piece regarding the contents of this medical policy is strictly prohibited without the prior written consent of Geisinger Health Plan. Additionally, the above medical policy does not confer any endorsement by Geisinger Health Plan, Geisinger Quality Options, Inc. and Geisinger Indemnity Insurance Company regarding the medical service, medical device or medical lab test described under this medical policy.