

Transpupillary Thermotherapy (TTT)

Policy Number: PG0149

Last Reviewed Date: 04/01/2025

Last Revised: 04/01/2025

HMO AND PPO

ELITE (MEDICARE ADVANTAGE)

MARKETPLACE

GUIDELINES:

- This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder terms, conditions, exclusions, and limitations contract. It does not constitute a contract or guarantee regarding coverage or reimbursement/payment. Self-Insured group specific policy will supersede this general policy when group supplementary plan document or individual plan decision directs otherwise.
- Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards.
- This medical policy is solely for guiding medical necessity and explaining correct procedure reporting used to assist in making coverage decisions and administering benefits.

SCOPE:

☒ Professional

☐ Facility

DESCRIPTION:

Transpupillary thermotherapy (TTT) is a method of delivering heat through the dilated pupil into the posterior segment of the eye. This method employs infrared radiation as the heat source, and is used to treat certain intraocular tumors, including retinoblastoma and choroidal melanoma. This laser technique differs from the laser used in standard photocoagulation therapy, in that thermotherapy applies a lower-power laser for periods that are more prolonged. It is designed to heat the lesion gently, limiting damage to the surrounding structures of the eye.

POLICY:

Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

- Transpupillary thermotherapy (67299) requires prior authorization.

COVERAGE CRITERIA:

Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans

Transpupillary thermotherapy may be considered medically necessary and eligible for reimbursement providing that at least one of the following medical criteria are met:

- Retinoblastoma involving less than 50 % of the retina, and without associated vitreal or subretinal seeds at the time of thermotherapy; *or*
- Small (2 to 3 mm) choroidal melanomas located posterior in the globe.

Transpupillary thermotherapy is considered investigational for the following indications, and all other indications other than those listed above:

- Central serous chorioretinopathy
- Choroidal indeterminate melanocytic lesions
- Choroidal metastases
- Choroidal neovascularization associated with age-related macular degeneration
- Circumscribed choroidal hemangioma
- Exudative (wet) Choroidal neovascularization due to age-related macular degeneration
- Peripheral retinal hemangioblastoma
- Polypoidal choroidal vasculopathy

- Retinal astrocytoma
- Retinopathy of prematurity

CODING/BILLING INFORMATION:

The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.

CPT CODES	
Transpupillary thermotherapy: no specific code	
67299	Unlisted procedure, posterior segment
92499	Unlisted ophthalmological service or procedure

REVISION HISTORY EXPLANATION: ORIGINAL EFFECTIVE DATE: 04/30/2007

Date	Explanation & Changes
06/15/2009	<ul style="list-style-type: none"> • Verbiage change
10/08/2013	<ul style="list-style-type: none"> • CPT code 0016T deleted 12/31/10 • Added code 67299 • ICD-10 Codes added from ICD-9 conversion • Policy reviewed and updated to reflect most current clinical evidence • Approved by Medical Policy Steering Committee as revised
08/08/2017	<ul style="list-style-type: none"> • Transpupillary thermotherapy (67299) now requires prior authorization • Policy reviewed and updated to reflect most current clinical evidence per Medical Policy Steering Committee
12/15/2020	<ul style="list-style-type: none"> • Medical policy placed on the new Paramount Medical Policy Format
02/09/2023	<ul style="list-style-type: none"> • Medical Policy updated to reflect Medicaid coverage to Anthem as of 02/01/2023
09/01/2023	<ul style="list-style-type: none"> • Medical Policy reviewed and updated to reflect the most current clinical evidence
02/21/2024	<ul style="list-style-type: none"> • Medical Policy placed on the new Paramount Medical Policy format
09/01/2024	<ul style="list-style-type: none"> • Medical Policy reviewed and updated to reflect the most current clinical evidence
04/01/2025	<ul style="list-style-type: none"> • Medical Policy reviewed and updated. No changes to current policy statement.

Paramount reserves the right to review and revise our policies periodically when necessary. When there is an update, we will publish the most current policy to

<https://www.paramounthealthcare.com/providers/medical-policies/policy-library>

REFERENCES/RESOURCES

Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services

<https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals> [https://www.cms.gov/Regulations-and-Guidance/Manuals/Internet-Only-Manuals-IOMs](https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs)

National Physician Fee Schedule Relative Value File Calendar Year XXXX, Centers for Medicare & Medicaid Services (CMS) <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files>

NCCI Policy Manual for Medicare Services, current version, Chapter 1, General Correct Coding Policies <https://www.cms.gov/files/document/medicare-ncci-policy-manual-2023-chapter-1.pdf>

American Medical Association, *Current Procedural Terminology (CPT®)* and associated publications and services <https://www.ama-assn.org/amaone/cpt-current-procedural-terminology>

Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets <https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update>

Centers for Medicare & Medicaid Services (CMS), ICD-10-CM Official Guidelines for Coding and Reporting <https://www.cms.gov/medicare/coding/icd10>

Centers of Medicare & Medicaid Services (CMS), Medicare Claims Processing Manual, Chapter 23-Fee Schedule administration and coding Requirements <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/clm104c23.pdf>

Centers for Medicare & Medicaid Services (CMS), National Correct Coding Initiative (NCCI) Policy Manual for Medicare Services <https://www.cms.gov/medicare-medicare-coordination/national-correct-coding-initiative-ncci/ncci-medicare>

Center for Medicare and Medicaid Services, Medicare NCCI Medically Unlikely Edits (MUEs) <https://www.cms.gov/medicare/coding-billing/national-correct-coding-initiative-ncci-edits/medically-unlikely-edits>
U.S. Preventive Services Task Force, <https://www.uspreventiveservicestaskforce.org/uspstf/>

Hayes, Inc., <https://www.hayesinc.com/>

Industry Standard Review

Sources of Information:

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- Chojniak MM, Chojniak R, Nishimoto IN, et al. Primary transpupillary thermotherapy for small choroidal melanoma. *Graefes Arch Clin Exp Ophthalmol*. 2011 Jun 29.
- 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
- Hajjaj A, et al. Efficacy and safety of current treatment options for peripheral retinal haemangioblastomas: a systematic review. *Acta Ophthalmol*. 2022 Feb;100(1):e38-e46.
- Harbour, WJ. Et al. (2025). Initial management of uveal and conjunctival melanomas. In: UpToDate, Hirsch IB (Ed), UpToDate, Waltham, MA.
- National Cancer Institute (NCI). Intraocular (Uveal) Melanoma Treatment. Health Professional version. PDQ® Updated December 19, 2024.
- National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology. Melanoma: Uveal . V1.2024; February 11, 2025.
- Shields CL, Shields JA, Cater J, et al. Plaque radiotherapy for retinoblastoma: long-term tumor control and treatment complications in 208 tumors. *Ophthalmology*. 2001;108(11):2116-2121.
- Shields CL, Shields JA, Perez N, et al. Primary transpupillary thermotherapy for small choroidal melanoma in 256 consecutive cases: outcomes and limitations. *Ophthalmology*. 2002a;109(2):225-234.
- Söderberg AC, Algvere PV, Hengstler JC, et al. Combination therapy with low-dose transpupillary thermotherapy and intravitreal ranibizumab for neovascular age-related macular degeneration: a 24-month prospective randomized clinical study. *Br J Ophthalmol*. 2012 May;96(5):714-8.
- U.S. Preventive Services Task Force, <https://www.uspreventiveservicestaskforce.org/uspstf/>