Transpupillary Thermotherapy (TTT)

MPM 20.5

Disclaimer

Refer to the member's specific benefit plan and *Schedule of Benefits* to determine coverage. This may not be a benefit on all plans or the plan may have broader or more limited benefits than those listed in this Medical Policy.

Description

Transpupillary thermotherapy (TTT) is one of several treatments that may be utilized for the treatment of retinoblastoma. TTT delivers low-intensity heat by infrared laser through the dilated pupil into the posterior segment of the eye. For the treatment of small retinoblastomas, TTT may be utilized alone or in conjunction with chemoreduction.[1,6,7,8] TTT is currently used in selected cases of small choroidal melanomas, either as a primary or adjunctive treatment.[2]

Coverage Determination

Prior Authorization is required. Logon to Pres Online to submit a request: https://ds.phs.org/preslogin/index.jsp

This technology has been reviewed and approved by the Technology Assessment Committee and the Medical Policy Committee.

Transpupillary thermotherapy is covered for the following indications:

- Retinoblastoma
- Small (2 to 3 mm) choroidal melanomas located posteriorly within the globe.

Exclusions

TTT is not covered for any indication other than those listed above.

Background

Retinoblastoma arises in the retina and accounts for about 3% of the cancers occurring in children younger than 15 years of age. Although retinoblastoma may occur at any age, it most often occurs in younger children. Treatments vary according to the size and location of the retinoblastoma, as well as factors such as vitreal or subretinal seeding. The goal of treatment is to eradicate the retinoblastoma and prevent blindness and other serious effects of treatment that reduce the life span or quality of survival.[1]

The accuracy of diagnosis for small melanomas is uncertain. Small tumors may not produce symptoms and may go undetected unless discovered during a routine eye examination. The management of choroidal melanomas depends on many factors, mostly importantly tumor size and location. In otherwise healthy patients, a small choroidal melanoma in the posterior fundus is amenable to several treatment options, including radiation therapy, laser photocoagulation, transpupillary thermotherapy, a combination of these methods, or even enucleation. Appropriate patient and tumor selection is critical to successful treatment. Follow-up is extremely important as late recurrences are not uncommon.[2,4,5,9]

Transpupillary Thermotherapy (TTT)
MPM 20.5

Coding **The coding listed in this Medical Policy is for reference only. Covered and non-covered codes may be included in this list.**

CPT Codes	Description
0016T	Destruction of localized lesion of choroid (eg, choroidal neovascularization), transpupillary thermotherapy

ICD-9© Diagnosis Codes	Description
190.5	Malignant neoplasm of retina
190.6	Malignant neoplasm of choroid

Reviewed by: Mark T. Chiu, MD, Eye Associates of New Mexico, Albuquerque, NM, July 2007, September 2009.

References:

1. National Cancer Institute. Retinoblastoma Treatment (Health Professional Version). Last Modified: 07-02-10. Accessed on the Internet 08-13-10. Accessed 12-02-11.Last Updated 10-13-11. No change. Accessed 2-14-13. Last Update 10-5-12 http://www.cancer.gov/cancertopics/pdq/treatment/retinoblastoma/healthprofessional .
2. National Cancer Institute. Intraocular (Eye) Melanoma Treatment (Health Professional Version). Last modified 12-05-07. Accessed on the Internet 08-13-10. No change. Accessed 2-14-13. Last update 11-09-12. http://www.cancer.gov/cancertopics/pdq/treatment/intraocularmelanoma/HealthProfessional
3. Hayes Directory. Transpupillary Thermotherapy for Choroidal Tumors and Macular Degeneration. 9-26-02. Last Update: 12-30-06. Archived 2008. Searched 12-1-11.No change.
4. Bartlema YM, Oosterhuis JG, Journee-deKorver RE, Tjho-Heslinga RE, Keunen JEE. Combined plaque radiotherapy and transpupillary thermotherapy in choroidal melanoma: 5 years' experience. Br J Ophthalmol 2003;87:1370-1373.
5. Pan Y, Diddie K, Lim JI. Primary transpupillary thermotherapy for small choroidal melanomas. Br J Ophthalmol 2007;92:747-750.
6. Shields CL, Meadows AT, Leahey AM, Shields JA. Continuing Challenges in the Management of Retinoblastoma with Chemotherapy. Retina 24:849-862, 2004.
7. Shields CL, Mashayekhi A, Cater J, Shelil A, Meadows AT, Shields JA. Chemoreduction for Retinoblastoma. Analysis of Tumor Control and Risks for Recurrence in 457 Tumors. Am J Ophthalmol 2004;138:329-337.
8. Shields CL, Mashayekhi A, Cater J, Shelil A, Ness S, Meadows AT, Shields JA. Macular Retinoblastoma Managed with Chemoreduction. Analysis of Tumor Control with or without Adjuvant Thermotherapy in 68 Tumors. Arch Opthalmol. 2005;123:765-773.

9. Shield 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;109:225-234.

Approval Signatures:

Clinical Quality Committee: Mark Whitaker MD

Medical Director: Albert Rizzoli MD

Approval Date: February 27, 2013

Publication History

07-25-07: PHP Internal Criteria, original effective date
07-23-08: Transition to Medical Policy, annual review and revision
09-23-09: Annual review and revision
09-22-10: Annual review
01-18-12: Annual Review
02-27-13: Annual Review

This Medical Policy is intended to represent clinical guidelines describing medical appropriateness and is developed to assist Presbyterian Health Plan and Presbyterian Insurance Company, Inc. (Presbyterian) Health Services staff and Presbyterian medical directors in determination of coverage. The Medical Policy is not a treatment guide and should not be used as such.

For those instances where a member does not meet the criteria described in these guidelines, additional information supporting medical necessity is welcome and may be utilized by the medical director in reviewing the case. Please note that all Presbyterian Medical Policies are available on the Internet at: http://www.phs.org/phs/healthplans/providers/healthservices/Medical/index.htm