

Policy Name	Clinical Policy – Pterygium Surgery
Policy Number	1329.00
Department	Clinical Product & Development
Subcategory	Medical Management
Original Approval Date	06/20/2018
Current MPC/CCO Approval Date	04/03/2024
Current Effective Date	07/01/2024

ACRONYMS or DEFINITIONS		
n/a		

PURPOSE

To provide criteria to support the indication(s) for pterygium excision surgery, with or without graft. Applicable procedure codes are also defined.

۲	O	LI	C	Y

A. BACKGROUND

A pterygium is a benign, fleshy growth of thickened conjunctiva, usually wedge shaped, encroaching on the cornea that can cause a disturbance of vision and may require surgical removal. Several causes for pterygium have been proposed. Environmental factors such as dry and/or dusty climates as well as exposure to ultraviolet (UV) light may play a role in initial formation. In addition to these factors, recurrent pterygiums may form secondary to surgical trauma. They are more often seen nasally than temporally and can be found at other locations besides 3 and 9 o'clock.¹

Double pterygia means two distinct pterygia on the same eye. Larger lesions can grow onto the cornea, become inflamed, red, and uncomfortable.

B. Medically Necessary

¹ V... 0004

¹ Xu, 2024



Pterygium surgery may be medically necessary when:

- 1. Topical therapy fails to relieve symptoms such as burning, itching, redness, or ocular discomfort;^{2 3} or,
- 2. The extent of the pterygium encroaches the pupillary axis with associated complaints of visual disturbance⁴; or,
- 3. There is symptomatic astigmatism greater than 2.5 diopters directly caused by the pterygium;⁵ and,
 - a. the patient has failed a trial of spectacles and/or contact lenses.
 - b. The trial of contact lenses is waived when medically contra-indicated (i.e., history of trabeculectomy or glaucoma filtering devices.
- 4. Repeat surgery for excision of recurrent pterygium may be medically necessary for the indications defined above.

C. Documentation

Medical necessity must be supported by adequate and complete documentation in the patient's medical record that describes the procedure and the medical rationale for it as in requirements above. All medical record items must be available upon request to initiate or sustain previous payments. For any retrospective review, a full operative report and/or the clinical care plan is needed.

Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, date(s) of service). Services provided/ordered must be authenticated by the physician, in a handwritten or electronic signature. Stamped signatures are not acceptable. The following documents may support the medical necessity for surgery:

- 1. The specific indication supporting the rationale for surgery; and,
- 2. The relevant medical history, physical examination, and results of pertinent diagnostic tests or procedures and the prescription for lenses; and,
- 3. If the pterygium encroaches the pupillary axis with associated complaints of visual disturbance, a clinical photograph of the intended surgical site may be requested.

D. Procedural Detail

CPT Codes		

² Frucht-Perry, 1997

³ Fonesca, 2017

⁴ Akbari. 2022

⁵ Lin, 1998



65420	Excision or transposition of pterygium; without graft
65426	Excision or transposition of pterygium; with graft – If billed with CPT code 65779, modifier 59, XE, XP, XS, or XU is required.
65779	Placement of amniotic membrane on the ocular surface; single layer, sutured.
Require	d Modifiers
RT	Right Side
LT	Left Side
50	Bilateral procedure
Invalid N	Modifiers
24	EM visit during post-op period
25	EM visit same day as minor procedure
57	EM visit same day as major procedure
26	Professional Component
TC	Technical Component

DISCLAIMER and COPYRIGHTS

This clinical 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 herein. Neither the company nor the employees represent that the use of such information, products, 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 process.

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, distributed or used without Versant Health, or its applicable affiliates, express prior written approval.

AMA COPYRIGHT STATEMENT CPT© is the 2002-2024 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 POLIC	IES AND PROCEDURES
n/a	

DOCUMENT HISTORY			
Approval Date	Revision	Effective Date	
06/20/2018	Initial Policy	06/20/2018	
07/25/2019	Annual review; minor revisions	08/01/2019	
06/03/2020	Annual review; no criteria changes	10/01/2020	
04/07/2021	Annual review; no criteria changes	07/01/2021	
04/06/2022	Annual review; no criteria changes	05/01/2022	
04/12/2023	Add requirement for clinical photograph of the intended surgical site when the pterygium encroaches the pupillary axis.	10/01/2023	
04/03/2024	Removed exclusion of patients with previous elective refractive procedure; removed trial duration requirement for trial of spectacles or contact lenses.	07/01/2024	

REFERENCES AND SOURCES

1. Akbari M. Update on overview of pterygium and its surgical management. J Popul Ther Clin Pharmacol. 2022 Nov 9;29(4):e30-e45. doi: 10.47750/jptcp.2022.968. PMID: 36371649.



- 2. Baheran SS, Alany RG, Schwikkard S, et.al. Pharmacological treatment strategies of pterygium: Drugs, biologics, and novel natural products. Drug Discov Today. 2023 Jan;28(1):103416. doi: 10.1016/j.drudis.2022.103416. Epub 2022 Oct 22. PMID: 36280041.
- 3. Clearfield E, Muthappan V, Wang X, et.al. Conjunctival autograft for pterygium. Cochrane Database Syst Rev. 2016 Feb 11;2:CD011349. doi: 10.1002/14651858.CD011349.pub2. PMID: 26867004; PMCID: PMC5032146.
- 4. Donepudi GD, Ramesh S, Govindarajulu M, et.al. Early postoperative outcomes of pterygium surgery: Sutures versus autogenous serum in-situ fixation of limbal conjunctival autograft. Life Sci. 2019 Mar 15; 221:93-98. doi: 10.1016/j.lfs.2019.02.019. Epub 2019 Feb 10. PMID: 30742868.
- 5. Fonseca EC, Rocha EM, Arruda GV. Comparison among adjuvant treatments for primary pterygium: a network meta-analysis. Br J Ophthalmol. 2018 Jun;102(6):748-756. doi: 10.1136/bjophthalmol-2017-310288. Epub 2017 Nov 16. PMID: 29146761.
- 6. Frucht-Pery J, Solomon A, Siganos et.al Treatment of inflamed pterygium and pinguecula with topical indomethacin 0.1% solution. Cornea. 1997 Jan;16(1):42-7. PMID: 8985633.
- 7. Ghiasian L, Samavat B, Hadi Y, Arbab M, Abolfathzadeh N. Recurrent Pterygium: A Review. J Curr Ophthalmol. 2022 Jan 6;33(4):367-378. doi: 10.4103/joco.joco_153_20. PMID: 35128181; PMCID: PMC8772501.
- 8. Hara T, Hashimoto T, Hara T. Pterygium surgery using the principle of contact inhibition: results of 13 years' experience. Graefes Arch Clin Exp Ophthalmol. 2017; 255(3):583–590.
- Hirst LW. The role of cosmesis in pterygium surgery. J Plast Reconstr Aesthet Surg. 2022 Oct;75(10):3877-3903. doi: 10.1016/j.bjps.2022.08.064. Epub 2022 Aug 24. PMID: 36050218.
- 10. Kwon SH, Kim HK. Analysis of recurrence patterns following pterygium surgery with conjunctival autografts. Medicine (Baltimore). 2015 Jan;94(4): e518. doi: 10.1097/MD.000000000000518. PMID: 25634207; PMCID: PMC4602970.
- 11. Levinger E, Sorkin N, Sella S, etal Posterior Corneal Surface Changes After Pterygium Excision Surgery. Cornea. 2020 Jul;39(7):823-826. doi: 10.1097/ICO.0000000000002325. PMID: 32251168.
- 12. Lin A, Stern G. Correlation between pterygium size and induced corneal astigmatism. Cornea. 1998 Jan;17(1):28-30. doi: 10.1097/00003226-199801000-00005. PMID: 9436877.Luanratanakorn P, Ratanapakorn T, Suwan-Apichon O, et.al. Randomised controlled study of conjunctival autograft versus amniotic membrane graft in pterygium excision. Br J Ophthalmol. 2006 Dec;90(12):1476-80. doi: 10.1136/bjo.2006.095018. Epub 2006 Jul 12. PMID: 16837545; PMCID: PMC1857513.
- 13. Luthra R, Nemesure BB, Wu SY et.al; Barbados Eye Studies Group. Frequency and risk factors for pterygium in the Barbados Eye Study. Arch Ophthalmol. 2001 Dec;119(12):1827-32. doi: 10.1001/archopht.119.12.1827. PMID: 11735795.
- Nuzzi R, Tridico F. How to minimize pterygium recurrence rates: clinical perspectives. Clin Ophthalmol. 2018 Nov 19; 12:2347-2362. doi: 10.2147/OPTH.S186543. PMID: 30538417; PMCID: PMC6251440.
- 15. Oner FH, Kaderli B, Durak I, et.al. Analysis of the pterygium size inducing marked refractive astigmatism. Eur J Ophthalmol. 2000 Jul-Sep;10(3):212-4. doi: 10.1177/112067210001000304. PMID: 11071028.
- 16. Rokohl AC, Heindl LM, Cursiefen C. Pterygium: pathogenesis, diagnosis, and treatment]. Ophthalmologe. 2021 Jul;118(7):749-763. German. doi: 10.1007/s00347-021-01366-9. Epub 2021 Mar 29. Erratum in: Ophthalmologe. 2021 May 11; PMID: 33782734.



- 17. Rosen R. Amniotic Membrane Grafts to Reduce Pterygium Recurrence. Cornea. 2018; 37(2):189–193.
- 18. Romano V, Cruciani M, Conti L, et.al. Fibrin glue versus sutures for conjunctival autografting in primary pterygium surgery. Cochrane Database Syst Rev. 2016 Dec 2;12(12):CD011308. doi: 10.1002/14651858.CD011308.pub2. PMID: 27911983; PMCID: PMC6463968.
- 19. Takahashi S, Manabe S, Ota N, et.al. Prediction of corneal curvature radius after pterygium surgery using anterior segment optical coherence tomography. Jpn J Ophthalmol. 2019 Mar;63(2):145-150. doi: 10.1007/s10384-019-00654-x. Epub 2019 Feb 19. PMID: 30783939.
- 20. Xu, W., Li, X. The effect of pterygium on front and back corneal astigmatism and aberrations in natural-light and low-light conditions. BMC Ophthalmol 24, 7 (2024). https://doi.org/10.1186/s12886-023-03270-z
- 21. Yin CJ, Bao YL, Zhang QC, et.al. Comparison of postoperative recovery of primary pterygium excision combined with either limbal stem cell transplantation or amniotic membrane transplantation: a randomized controlled trial-based meta-analysis. Am J Transl Res. 2023 Feb 15;15(2):641-652. PMID: 36915777; PMCID: PMC10006757.
- 22. Yoon CH, Seol BR, Choi HJ. Effect of pterygium on corneal astigmatism, irregularity and higher-order aberrations: a comparative study with normal fellow eyes. Sci Rep. 2023 May 5;13(1):7328. doi: 10.1038/s41598-023-34466-4. PMID: 37147412; PMCID: PMC10163024.
- 23. Zhang Q, Bao N, Liang K, et.al. Adjuvant Use of Cyclosporine A in the Treatment of Primary Pterygium: A Systematic Review and Meta-Analysis. Cornea. 2018; 37(8):1000–1007. Apr; 34(3):197-8. Am J Pathol. 2011 Feb; 178(2): 817-827. 2xsw32xswConjunctival Autografts. Medicine (Baltimore). 2015 Jan; 94(4): e518. 2016 Feb 11; 2.

SOURCES

- 1. American Academy of Ophthalmology. Understanding pterygium reoperation risk factors may improve patient care. https://www.aao.org/education/editors-choice/understanding-pterygium-reoperation-risk-factors-m. Accessed 2/2024
- American Academy of Ophthalmology. Update on Evolving Approaches for Pterygia. May 2023. https://www.aao.org/eyenet/article/update-on-evoking-approaches-for-pterygia. Accessed 2/2024.