

Medical Policy



An Independent Licensee of the
Blue Cross and Blue Shield Association.

Title: Pachymetry

Professional

Original Effective Date: March 11, 2004

Revision Date(s): November 3, 2005

Current Effective Date: February 1, 2006

DESCRIPTION

Ophthalmic ultrasound is done to determine corneal thickness on one or both eyes by using corneal pachymetry, which is non-invasive and painless. Measuring the cornea is done by administering a topical anesthetic into the eye and placing a plastic ultrasonic probe onto the central cornea. A pachymetry uses ultrasound to determine the thickness of the cornea in any given location.

Corneal thickness directly affects assumptions made in the Goldman tonometry formula used in the measurement of intraocular pressure. Corneal thickness provides indirect measurement of physiologic function of the cornea.

POLICY

Pachymetry testing will be allowed:

- Once per lifetime,
- Once per lifetime for patients with Vision Correction Surgery Coverage or
- Once per year

(See Covered Diagnosis section for a listing of codes)

CODING

CPT

76514 Ophthalmic ultrasound, diagnostic: corneal pachymetry, unilateral or bilateral (determination of corneal thickness)

DIAGNOSIS

These diagnoses are otherwise subject to medical policy as stated above

Pachymetry once per lifetime for the following codes:

364.53	Pigmentary iris degeneration
364.77	Recession of chamber angle
365.00	Borderline glaucoma [glaucoma suspect]; preglaucoma, unspecified
365.01	Borderline glaucoma [glaucoma suspect]; open angle with borderline findings

365.02	Borderline glaucoma [glaucoma suspect]; anatomical narrow angle
365.03	Borderline glaucoma [glaucoma suspect]; steroid responders
365.04	Borderline glaucoma [glaucoma suspect]; ocular hypertension
365.10	Open-angle glaucoma, unspecified
365.11	Primary open angle glaucoma
365.12	Low tension glaucoma
365.13	Pigmentary glaucoma
365.14	Glaucoma of childhood
365.20	Primary angle-closure glaucoma, unspecified
365.23	Chronic angle-closure glaucoma
366.11	Pseudoexfoliation of lens capsule
Pachymetry <u>once per lifetime</u> for the following codes for patients with Vision Correction Surgery Coverage:	
367.0	Hypermetropia
367.1	Myopia
367.20	Astigmatism, unspecified
Pachymetry may be performed <u>once per year</u> in the following codes:	
371.20	Corneal edema, unspecified
371.21	Idiopathic corneal edema
371.22	Secondary corneal edema
371.23	Bullous keratopathy
371.57	Endothelial corneal dystrophy
371.58	Other posterior corneal dystrophies
996.51	Mechanical complications of other specified prosthetic device, implant, and graft; due to corneal graft

REFERENCES

1. Chen PP Correlation of visual field progression between eyes in patients with open-angle glaucoma Ophthalmology 2002; 19:2093-2099
2. Diaz-Valle D, Benitez del Castillo Sanchez JM et.al Endothelial damage with cataract surgery techniques J Cataract Refract Surgery 1998 Jul 24(7):951-5
3. Doughty MJ et al. Human corneal thickness and its impact on intraocular pressure measures: A review and meta-analysis approach surv Ophthalmol 2000; 44:367-408
4. Ehlers N et al. Biometric correlations of corneal thickness Acta Ophthalmol Copenh 1975; 53:652-659
5. Emara BY, Tingey DP et al Central corneal thickness in low tension glaucoma Can J Ophthalmol 1999 Oct; 34(6):319-24
6. Gordon, MO, Beiser JA, et al. The ocular hypertension treatment study: Baseline factors that predict the onset of primary open angle glaucoma. Arch Ophthalmol 2002; 120 (June):714-719
7. Herman DC, Hodge DO, Bourne WM, Increased corneal thickness in patients with ocular hypertension Arch Ophthalmol 2001 Mar; 119(3):334-6
8. Kass MA, Heuer DK, et al. The Ocular Hypertension Treatment Study: A Randomized Trial Determines That Topical Ocular Hypotensive Medication

- Delays or Prevents the Onset of Primary Open-Angle Glaucoma. Arch Ophthalmol 2002; 120 (June):701-713
9. LaRosa FA, Gross RL, Orengo-Nania S Central corneal thickness of Caucasians and African-Americans in glaucomatous and non-glaucomatous populations Arch Ophthalmol 2001 Jan; 119(1):23-7
 10. Marsich MW, Beillemore MA, The repeatability of corneal thickness measures Cornea 2000 Nov; 19(6):792-5
 11. Palmberg P Answers from The Ocular Hypertension Treatment Study Arch Ophthalmol 2002 June; 120(6):829-830
 12. Ravalico G, Tognetto D et al Corneal endothelial function after extracapsular cataract extraction and phacoemulsification J Cataract Refract Surg 1997 Sep; 23(7):967-8
 13. Reep OF, Cagil N, Hasiripi H Correlation between intraocular pressure and corneal stromal thickness after laser in situ keratomileusis J Cataract Refract Surg 2001 Aug; 27(8):1146-7
 14. Reep OF, Cagil N et al Relation between corneal thickness and intraocular pressure measurement by noncontact and applanation tonometry J Cataract Refract Surg 2001 Nov; 27(11):1787-91
 15. Shah S, Catterjee A et al Relationship between corneal thickness and measured intraocular pressure in a general ophthalmologic clinic Ophthalmology 1999 Nov; 106(11):2154-60
 16. Ventura AC, Walti R, Bohnke M Corneal thickness and endothelial density before and after cataract surgery Br J Ophthalmol 2001 Jan; 85(1):18-20
 17. Ventura AC, Bohnke M, Mojon DS Central corneal thickness measurements in patients with normal tension glaucoma, open angle glaucoma pseudoexfoliation glaucoma, or ocular hypertension. Br J Ophthalmol 2001; Jul 85(7):792-5
 18. Whitacre MM, Stein RA, Hassanein K The effect of corneal thickness on applanation tonometry Am J Ophthalmol 1993 May 15; (5):592-6
 19. Wilson MR et al. Progression of visual field loss in untreated glaucoma patients and glaucoma suspects in St. Lucia, West Indies Am J Ophthalmol 2002; 134:399-405
 20. Other carrier policies

Government Agency; Medical Society; and Other Authoritative Publications

1. Blue Cross and Blue Shield of Kansas Ophthalmology Liaison Committee, May 4, 2005 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC-03-05).
2. Blue Cross and Blue Shield of Kansas Optometric Liaison Committee, May 26, 2005 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC-03-05).
3. Blue Cross and Blue Shield of Kansas Medical Advisory Committee meeting, November 3, 2005 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC-03-05).