MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	**OPTICAL COHERENCE TOMOGRAPHY FOR OPHTHALMOLOGIC APPLICATIONS**
Policy Number	**9.01.10**
Category	**Technology Assessment**
Effective Date	**09/16/04**
Revised Date	**06/16/05, 04/20/06, 03/15/07, 05/14/08, 05/28/09, 05/27/10, 05/19/11, 05/24/12, 05/23/13, 05/22/14, 05/28/15, 04/21/16, 4/20/17, 04/19/18, 04/18/19**
Product Disclaimer	• *If a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.* • *If a commercial product (including an Essential Plan product) or a Medicaid product covers a specific service, medical policy criteria apply to the benefit.* • *If a Medicare product covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.*

POLICY STATEMENT

I. Based upon our criteria and assessment of peer-reviewed literature, imaging of the *posterior segment* of the eye using optical coherence tomography (OCT) has been medically proven to be effective and therefore, **medically appropriate** for the following:
   A. In the evaluation of patients with retinal diseases. Retinal diseases include, but are not limited to macular edema, macular holes, choroidal lesions and retinal inflammatory diseases; or
   B. As a method for detecting glaucoma damage to the retinal nerve fiber layer (RNFL):
      1. In glaucoma suspects; or
      2. For routine monitoring for progression of the disease in known glaucoma patients.

II. Based upon our criteria and assessment of peer-reviewed literature, imaging of the *anterior segment* of the eye using OCT has not been medically proven effective and is considered **investigational**.

Refer to Corporate Medical Policy #9.01.06 regarding Ophthalmologic Techniques for the Diagnosis of Glaucoma (Scanning Laser Polarimetry and Ophthalmoscopy)

POLICY GUIDELINES

The Federal Employee Health Benefit Program (FEHBP/FEP) requires that procedures, devices or laboratory tests approved by the U.S. Food and Drug Administration (FDA) may not be considered investigational and thus these procedures, devices or laboratory tests may be assessed only on the basis of their medical necessity.

DESCRIPTION

OCT is a noninvasive, non-contact diagnostic imaging technique that provides high resolution, cross sectional images of the retina in vivo. OCT is analogous to ultrasonic pulse echo imaging, except that light rather than sound is used to measure the distance between reflective surfaces. This technique allows visualization of tissue morphologic characteristics at depths significantly greater than the penetration depth offered by conventional bright-field and confocal microscopy. As a result of this high resolution, the clinical utility of OCT has been investigated for imaging of both the anterior and posterior segments of the eye.

OCT imaging of the posterior segment is utilized for a broad range of retinal/macular conditions as well as providing measurements of the RNFL thickness. The RNFL is the innermost layer of the retina and consists of ganglion cell axons, which are the target cells in glaucoma. Axonal loss in glaucoma causes visual field loss, which, however, is only detected when a considerable amount of the nerve fiber layer has been lost. It has been proposed that RNFL defects can precede optic disc and visual field damage by several years and may be the earliest sign of glaucomatous damage.

The anterior segment is the front third of the eye and includes the structures in front of the vitreous humour: the cornea, iris, ciliary body and lens. Within the anterior segment are two fluid-filled spaces, the anterior and posterior chambers. While gonioscopy is currently the standard method for clinically assessing the anterior chamber angle, imaging of the anterior segment by OCT has also been utilized in determining the width of the anterior chamber angle, an important measurement in the diagnosis of angle-closure glaucoma. Use of OCT imaging of the anterior segment has also been investigated in the measurement of other anterior segment structures including anterior chamber depth, and anterior chamber diameters. It has been utilized in the measurement of corneal thickness to help qualify patients for vision correction/refractive surgery; for the measurement of corneal flap thickness and residual stromal thickness following a refractive procedure; and in the pre and post-operative evaluation of patients undergoing cataract extraction and intraocular lens insertion.

Two separate OCT devices are utilized for imaging the posterior and anterior segments of the eye. OCT imaging of the posterior segment uses a 0.8 micron wavelength light source which is specifically designed for evaluating the optic nerve head, retinal thickness and RNFL; anterior segment imaging utilizes a 1.3 micron wavelength light that penetrates the sclera, allowing for cross sectional imaging of the anterior chamber and ciliary body. The light, however, is typically blocked by pigment, preventing exploration behind the iris.

RATIONALE

Posterior segment

Several OCT devices for viewing the posterior segment of the eye have received FDA approval. Examples include, but are not limited to, the OCT3, Stratus OCT™ and Cirrus™ HD-OCT. These devices are intended for use as a diagnostic device to aid in the detection and management of ocular diseases, including but not limited to macular edema, central serous retinopathy, diabetic retinopathy age-related macular degeneration and glaucoma.

The evidence from clinical studies has demonstrated that OCT can provide additional information as good as or superior to currently available techniques. Imaging of the posterior segment of the eye using OCT provides qualitative information about retinal disorders as well as quantitative measurements of retinal anatomy. OCT has been found to be a valuable tool for the evaluation and treatment of patients with retinal diseases. OCT has been found to be useful to measure the effectiveness of therapy, determining the need for ongoing therapy, or the safety of cessation of that therapy.

Numerous articles continue to describe findings from patients with known and suspected glaucoma using scanning laser techniques such as OCT. Studies note that abnormalities may be detected on these examinations before functional changes are noted. These techniques have become incorporated into glaucoma care and are viewed as an additional piece of information that may be useful in the clinical management of these patients. There is data to demonstrate that this testing is equivalent to expert assessment of optic disc photography for both detecting glaucoma and showing disease progression. There are also favorable aspects of this testing. For example, in contrast to other glaucoma testing, these tests can be done more easily, e.g. this testing does not always need to done with dilated pupils and ambient light level may be (is) less critical. In addition, while serial stereo-photographs of the optic nerves are considered by many as the gold standard, these are not always practical, especially for general ophthalmologists. This testing also requires less cooperation from the patient, which can be helpful in some older patients. In summary, the use of a scanning laser technique such as OCT has become one additional test than may be utilized in the diagnosis and management of patients with glaucoma. These results are often considered along with other findings to make diagnostic and therapeutic decisions about glaucoma care.

Anterior segment

The Visante OCT received marketing clearance through the FDA 510(k) process in 2005. The 510(k) summary describes the Visante OCT as “a non-contact, high resolution tomographic and biomicroscopic device indicated for the in vivo imaging and measurement of ocular structures in the anterior segment, such as corneal and LASIK flap thickness”. The SL-OCT (Heidelberg Engineering) is also another dedicated anterior segment OCT.

WP Nolan, et al. (2007) assessed the ability of a prototype of the Visante OCT to detect primary angle closure in 203 Asian patients. The patients, recruited from glaucoma clinics, had been diagnosed with primary angle closure, primary open-angle glaucoma, ocular hypertension, and cataracts; some had previously been treated with iridotomy. Images were

assessed by two glaucoma experts, and the results were compared to an independently obtained reference standard (gonioscopy). Data were reported from 342 eyes of 200 individuals. A closed angle was identified in 152 eyes with gonioscopy and 228 eyes with OCT, agreement was obtained between the two methods in 143 eyes. The authors suggest three possible reasons for the increase in identification of closed angles with OCT: lighting is known to affect angle closure, and the lighting conditions were different for the two methods (gonioscopy requires some light); placement of the gonioscopy lens on the globe may have caused distortion of the anterior segment; and landmarks are not the same with the two methods. The authors noted that longitudinal studies will be required to determine whether eyes classified as closed by OCT but not by gonioscopy are at risk of developing primary angle-closure glaucoma.

Another prospective observational study by M Kalev-Landoy and colleagues (2007) evaluated imaging of the anterior angle chamber with the Stratus OCT, which had been developed for retinal imaging. Ten eyes with normal open angles and 16 eyes with narrow or closed angles or plateau iris configuration as determined by gonioscopy were assessed. The OCT image was rated for quality, for ability to demonstrate the anterior chamber angle, and for ability to visualize the iris configuration; patients were classified as having open angles, narrow angles, closed angles, or plateau iris configuration. Ultrasound biomicroscopy was performed for comparison if plateau iris configuration was diagnosed. The investigators reported that the Stratus OCT provided high-resolution images of iris configuration and narrow or closed angles, and imaging of the angle was found to be adequate in cases of acute angle-closure glaucoma where the cornea was to cloudy to enable a clear gonioscopic view. Open angles and plateau iris configurations could not be visualized with the 0.8-micron wavelength Stratus OCT.

Ideally, a diagnostic test would be evaluated based on its technical performance, diagnostic performance (sensitivity and specificity), and clinical validity. Current literature consists primarily of assessments of qualitative and quantitative imaging and detection capabilities. Technically, the Visante OCT has the ability to create high-resolution images of the anterior eye segment. Studies indicate that the Visante OCT detects more eyes with narrow or closed angles than gonioscopy, showing high sensitivity and low specificity in comparison with the reference standard. However, if the reference standard is flawed (e.g., does not detect all cases), the information provided by sensitivity and specificity is limited. Evaluation of the diagnostic performance of the Visante OCT depends, therefore, on demonstration of an improvement in clinical outcomes. Although the resolution of the images and the ease of use might be considered advantageous, evidence is insufficient to determine whether use of OCT can improve detection and management of patients at risk of developing primary angle-closure glaucoma. Given the number of questions regarding the impact of this new technology on health outcomes, this procedure is considered investigational.

CODES

- *Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract.*
- *CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.*
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*

CPT Codes

Code	Description
92132 **(E/I)**	Scanning computerized ophthalmic diagnostic imaging, anterior segment, with interpretation and report, unilateral or bilateral
92133	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral, optic nerve
92134	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral, retina

HCPCS Codes

Code	Description
No specific codes	

ICD10 Codes

Code	Description
A18.53	Tuberculous chorioretinitis
E08.311-E08.359	Diabetes mellitus due to underlying condition with diabetic retinopathy with/without macular edema (code range)
E09.311-E09.359	Drug or chemical induced diabetes mellitus with diabetic retinopathy with/without macular edema (code range)
E10.311-E10.359	Type 1 diabetes mellitus with diabetic retinopathy with/without macular edema (code range)
E11.311-E11.359	Type 2 diabetes mellitus with diabetic retinopathy with/without macular edema (code range)
E13.311-E13.359	Other specified diabetes mellitus with diabetic retinopathy with/without macular edema (code range)
G45.3	Amaurosis fugax
H30.001-H30.139	Chorioretinal inflammation (code range)
H30.141-H30.149	Acute posterior multifocal placoid pigment epitheliopathy (code range)
H30.20-H30.23	Posterior cyclitis (code range)
H30.811-H30.819	Harada's disease (code range)
H30.891-.H30.899	Other chorioretinal inflammations (code range)
H30.90-H30.93	Unspecified chorioretinal inflammation (code range)
H31.001-H31.099	Chorioretinal scars (code range)
H31.101-H31.9	Choroidal degeneration (code range)
H32	Chorioretinal disorders in diseases classified elsewhere
H33.001-H33.8	Retinal detachments and breaks (code range)
H34.00-H34.9	Retinal vascular occlusions (code range)
H35.00-H35.9	Other retinal disorders (code range)
H36	Retinal disorders in diseases classified elsewhere
H40.001-H40.009	Preglaucoma, unspecified (code range)
H40.011-H40.029	Open angle with borderline findings (code range)
H40.031-H40.039	Anatomical narrow angle (code range)
H40.041-H400.49	Steroid responder (code range)
H40.051-H40.059	Ocular hypertension (code range)
H40.061-H40.069	Primary angle closure without glaucoma damage (code range)
H40.10X0-H40.10X4	Unspecified open-angle glaucoma (code range)
H4011X4-H40.11X4	Primary open-angle glaucoma (code range)
H40.1210-H40.1294	Low-tension glaucoma (code range)
H40.1310-H40.1394	Pigmentary glaucoma (code range)
H40.1410-H40.1494	Capsular glaucoma with pseudoexfoliation of lens (code range)
H40.1510-H40.1594	Residual stage of open-angle glaucoma (code range)
H40.20X0-H40.20X4	Unspecified primary angle-closure glaucoma (code range)
H40.211-H40.219	Acute angle-closure glaucoma (code range)
H40.2210-H40.2294	Chronic angle-closure glaucoma (code range)
H40.231-H40.239	Intermittent angle-closure glaucoma (code range)
H40.241-H40.249	Residual stage of angle-closure glaucoma (code range)
H40.30X0-H40.33X4	Glaucoma secondary to eye trauma (code range)
H40.40X0-H40.43X4	Glaucoma secondary to eye trauma (code range)
H40.50X0-H40.53X4	Glaucoma secondary to other eye disorders (code range)
H40.60X0-H40.63X4	Glaucoma secondary to drugs (code range)
H40.811-H40.89	Other glaucoma (code range)
H42	Glaucoma in diseases classified elsewhere

Code	Description
H43.00-H43.399	Other vitreous opacities (code range)
H43.811-H43.9	Other disorders of the vitreous body (code range)
Q15.0	Congenital glaucoma

REFERENCES

*Agarwal A, et al. High-speed optical coherence tomography for imaging anterior chamber inflammatory reaction in uveitis: clinical correlation and grading. Am J Ophthalmol 2009 Mar;147(3):413-6.

*American Academy of Ophthalmology Preferred Practice Pattern. Primary open-angle glaucoma suspect. 2005 Sep, updated 2015 Nov [https://www.aao.org/preferred-practice-pattern/primary-open-angle-glaucoma-suspect-ppp-2015] accessed 2/26/19.

American Academy of Ophthalmology. Preferred Practice Pattern. Primary angle closure. Updated 2015 Nov [https://www.aao.org/preferred-practice-pattern/primary-angle-closure-ppp-2015] accessed 2/26/19.

Ang M, et al. Optical coherence tomography angiography for anterior segment vasculature imaging. Ophthalmology 2015 Sep;122(9):1740-7.

Ang M, et al. Optical coherence tomography angiography and indocine green angiography for corneal vascularization. Br J Ophthalmol 2016 Jan 28.[Epub ahead of print].

*Arevalo JF, et al. Optical coherence tomography characteristics of full-thickness traumatic macular holes. Eye 2008 Nov;22(11):1436-41.

Azrak C, et al. Validity of optical coherence tomography as a diagnostic method for diabetic retinopathy and diabetic macular edema. Medicine 2015 Sep;94(38):e1579.

*Baskaran M, et al. Comparison of Eyecam and anterior segment optical coherence tomography in detecting angle closure. Acta Ophthalmol 2012 Dec;90(8):e621-5.

*Bertuzzi F, et al. Concordance of retinal nerve fiber layer defects between fellow eyes of glaucoma patients measured by optical coherence tomography. Am J Ophthalmol 2009 Jul;148(1):148-54.

*Bianciotto C, et al. Assessment of anterior segment tumors with ultrasound biomicroscopy versus anterior segment optical coherence tomography in 200 cases. Ophthalmology 2011;118(7):1297-1302.

BlueCross BlueShield Association. Ophthalmologic techniques of evaluating glaucoma. Medical Policy Reference Manual Policy #9.03.06. 2018 March 8.

BlueCross BlueShield Association. Anterior eye segment optical imaging. Medical Policy Reference Manual. Policy #9.03.18. 2018 March 8.

*BlueCross BlueShield Association Technology Evaluation Center (TEC). Retinal nerve fiber layer analysis for the diagnosis and management of glaucoma. 2003 August;18(7).

*Budenz DL, et al. Sensitivity and specificity of the StratusOCT for perimetric glaucoma. Ophthalmol 2005 Jan;112(1):3-9.

*Cauduro RS, et al. Application of anterior segment optical coherence tomography in pediatric ophthalmology. J Ophthalmology 2012;2012:313120.

*Diabetic Retinopathy Clinical Research Network. Diural variation in retinal thickening measurement by optical coherence tomography in center-involved diabetic macular edema. Arch Ophthalmol 2006 Dec;124(12):1701-7.

*Dinc UA, et al. Assessment of anterior chamber angle using Visante OCT, slit lamp OCT, and Pentacam. Eur J Ophthalmol 2010 May-Jun;20(3):531-7.

Ehlers JP, et al. The prospective intraoperative and perioperative ophthalmic imaging with optical coherence tomography (PIONEER) study: 2-year results. Am J Ophthalmol 2014 Nov;158(5):999-1007.

Ehlers JP, et al. Intraoperative optical coherence tomography using the RESCAN 700: preliminary results from the DISCOVER study. Br J Ophthalmol 2014 Oct;98(10):1329-32.

*Fante RJ, et al. Anterior segment optical coherence tomography versus ultrasound pachymetry to measure corneal thickness in endothelial keratoplasty donor corneas. Cornea 2012 Dec 12 [Epub ahead of print].

Garg A, et al. Using anterior segment optical coherence tomography to monitor disease progression in peripheral ulcerative keratitis. Case Reports in Opthalmological Medicine 2018; 2018:1-4. https://doi.org/10.1155/2018/3705753.

*Goldsmith JA, et al. Anterior chamber width measurement by high-speed optical coherence tomography. Ophthalmol 2005 Feb;112(2):238-44.

*Grewal DS, et al. Comparison of Scheimpflug imaging and spectral domain anterior segment optical coherence tomography for detection of narrow anterior chamber angles. Eye 2011 May;25(5):603-11.

Hau SC, et al. Evaluation of iris and iridociliary body lesions with anterior segment optical coherence tomography versus ultrasound B-scan. Br J Ophthalmol 2015 Jan;99(1):81-6.

Holland SM, et al. Retrospective analyses of optical coherence tomography in recurrent macular edema following intravitreal therapy in patients with retinal vein occlusion. BMC Ophthalmol 2015 Sep 4;15:117.

*Jeoung JW, et al. Diagnostic ability of optical coherence tomography with a normative database to detect localized retinal nerve fiber layer defects. Ophthalmol 2005 Dec;112(12):2157-63.

*Jiang C, et al. Study of anterior chamber aqueous tube shunt by fourier-domain optical coherence tomography. J Ophthalmol 2012;2012:189580.

*Jittpoonkuson T, et al. Correlation between fluorescein angiography and spectral-domain optical coherence tomography in the diagnosis of cystoid macular edema. Br J Ophthalmol 2010 Sep;94(9):1197-200.

*Keane PA, et al. Relationship between optical coherence tomography retinal parameters and visual acuity in neovascular age-related macular degeneration. Ophthalmol 2008 Dec;115(12):2206-13.

*Kiernan DF, et al. prospective comparison of cirrus and stratus optical coherence tomography for quantifying retinal thickness. Am J Ophthalmol 2009 Feb;147(2):267-75.

*Kim HY, et al. Comparison of central corneal thickness using anterior segment optical coherence tomography vs ultrasound pachymetry. Am J Ophthalmol 2008 Feb;145(2):228-32.

*Kim DY, et al. Characteristics and reproducibility of anterior chamber angle assessment by anterior-segment optical coherence tomography. Acta Ophthalmol 2011 Aug;89(5):435-41.

Kojima S, et al. Filtering blebs using 3-dimensional anterior-segment optical coherence tomography: a prospective investigation. JAMA Ophthalmol 2015 Feb;133(2):148-56.

Lan J, et al. Evaluation of the narrow anterior chamber angle by anterior segment optical coherence tomography. Ophthalmic Res 2017;57(2);87-91.

Le Q, et al. Measurement of corneal and limbal epithelial thickness by anterior segment optical coherence tomography and in vivo confocal microscopy. BMC Ophthalmol 2016 Sept 20;16(1):163.

*Leung CK, et al. Comparative study of retinal nerve fiber layer measurement by StatusOCT and GDx VCC, II: structure/function regression analysis in glaucoma. Invest Ophthalmol Vis Sci 2005 Oct;46(10):3702-11.

*Leung CK, et al. Anterior chamber angle measurement with anterior segment optical coherence tomography (OCT)- A comparison between slit lamp OCT and Visante OCT. Invest Ophthalmol Vis Sci 2008 Apr 11 [Epub ahead of print].

*Leung CK, et al. Anterior chamber angle imaging with optical coherence tomography. Eye 2011 Mar;25(3):261-7.

Li P, et al. Anterior segment optical coherence tomography evaluation of ocular graft-versus-host disease: a case study. Quant Imaging Med Surg 2015 Feb;5(1):163-70.

*Liu S, et al. Anterior chamber imaging with swept-source optical coherence tomography; an investigation on variability of angle measurement. Invest Ophthalmol Vis Sci 2011 Nov 4;52(12):8598-603.

*Lu AT, et al. Combining nerve fiber layer parameters to optimize glaucoma diagnosis with optical coherence tomography. Ophthalmol 2008 Aug;115(8):1352-7.

*Mansouri K, et al. Prospective comparison of ultrasound biomicroscopy and anterior segment optical coherence tomography for evaluation of anterior chamber dimensions in European eyes with primary angle closure. Eye 2010 Feb;24(2):233-9.

*Medeiros FA, et al. Evaluation of retinal nerve fiber layer, optic nerve head and macular thickness measurements for glaucoma detection using optical coherence tomography. Am J Ophthalmol 2005 Jan;139(1):44-55.

Medina CA, et al. Optical coherence tomography imaging of ocular and periocular tumours. Br J Ophthalmol 2014 Jul;98 (Suppl 2):ii40-46.

Michelessi M, et al. Optic nerve head and fibre layer imaging for diagnosing glaucoma. Cochrane Database Syst Rev 2015(11):CD008803.

Miller JB, et al. Long-term follow-up and outcomes in traumatic macular holes. Am J Ophthalmol 2015 Dec;160 (6):1255-8.

*Mistlberger A, et al. Assessment of optic disc anatomy and nerve fiber layer thickness in ocular hypertensive subjects with normal short-wavelength automated perimetry. Ophthalmol 2002 Jul;109(7):1362-6.

*Moreira RO, et al. Use of optical coherence tomography (OCT) and indirect ophthalmoscopy in the diagnosis of macular edema in diabetic patients. Int Ophthalmol 2001;24(6):331-6.

*Moutsouris K, et al. Optical coherence tomography, scheimpflug imaging, and slit lamp biomicroscopy in the early detection of graft detachment after descemet membrane endothelial keratoplasty. Cornea 2011 Dec;30(12):1369-75.

*Narayanswamy A, et al. Diagnostic performance of anterior chamber angle measurements for detecting eyes with narrow angles. Arch Ophthalmol 2010 Oct;128(10):1321-7.

*Neri A, et al. Corneal thickness mapping by 3D swept-source anterior segment optical coherence tomography. Acta Ophthalmol 2012 Sep;90(6):e452-7.

Ong SS, et al. Anterior segment imaging in ocular surface squamous neoplasia. J Ophthalmol 2016;2016:5435092.

*Pavlin CJ, et al. Anterior segment optical coherence tomography and ultrasound biomicroscopy in the imaging of anterior segment tumors. Am J Ophthalmol 2009 Feb;147(2):214-9.

*Pekmezci M, et al. Anterior segment optical coherence tomography as a screening tool for the assessment of the anterior segment angle. Ophthalmic Surg Lasers Imaging 2009 Jul-Aug;40(4):238-398.

*Radhakrishnan S, et al. Comparison of optical coherence tomography and ultrasound biomicroscopy for detection of narrow anterior chamber angles. Arch Ophthalmol 2005 Aug;123(8):1053-9.

*Razzaq L, et al. Anterior segment imaging for iris melanocytic tumors. Eur J Ophthalmol 2011 Jan 3 [Epub ahead of print].

Rossetto JD, et al. Accuracy of optical coherence tomography measurements of rectus muscle insertions in adult patients undergoing strabismus surgery. Am J Ophthalmol 2017 April;176:236-243.

*Sakata LM, et al. Comparison of gonioscopy and anterior segment ocular coherence tomography in detecting angle closure in different quadrants of the anterior chamber angle. Ophthalmol 2008 May;115(5):769-74.

*Sakata LM, et al. Comparison of Vistante and slit lamp anterior segment optical coherence tomography in imaging the anterior chamber angle. Eye 2010 Apr;24(4):578-87.

Sharma S, et al. Automated analysis of anterior chamber inflammation by spectral-domain optical coherence tomography. Ophthalmology 2015 Jul;122(7):1464-70.

Silva LD, et al. Anterior segment optical coherence tomography findings in type 1 Boston keratoprosthesis. Arq Bras Oftalmol. 2018;81(1):42-6.

*Suh MH, et al. Associations between macular findings by optical coherence tomography and visual outcomes after epiretinal membrane removal. Am J Ophthalmol 2009 Mar;147(3):473-80.

Takezawa Y, et al. Observation of retrocorneal plaques in patients with infectious keratitis using anterior segment optical coherence tomography. Cornea 2017 Oct;36(10):1237-1242.

*Tan AN, et al. Reproducibility of anterior chamber angle measurements with anterior segment optical coherence tomography. Invest Ophthalmol Vis Sci 2011 Apr;52(5):2095-9.

Venincasa MJ, et al. Combination of anterior segment optical coherence tomography modalities to improve accuracy of rectus muscle insertion location. J AAPOS 2017 June;21(3):243-246.

*Wollstein G, et al. Ultrahigh-resolution optical coherence tomography in glaucoma. Ophthalmol 2005 Feb;112(2):229-37.

*Wollstein G, et al. Comparison of three optical coherence tomography scanning areas for detection of glaucomatous damage. Am J Ophthalmol 2005 Jan;139(1):39-43.

*Wollstein G, et al. Optical coherence tomography longitudinal evaluation of retinal nerve fiber layer thickness in glaucoma. Arch Ophthalmol 2005 Apr;123(4):464-70.

*Wong HT, et al. Comparison of slitlamp optical coherence and scanning peripheral anterior chamber depth analyzer to evaluate angle closure in Asian eyes. Arch Ophthalmol 2009 May;127(5):599-603.

*Wu RY, et al. Association of narrow angles with anterior chamber area and volume measured with anterior-segment optical coherence tomography. Arch Ophthalmol 2011 May;129(5):569-74.

*Zhang HT, et al. Anterior segment optical coherence tomography of acute primary angle closure. Graefes Arch Clin Ophthalmol 2010 Jun;248(6):825-31.

*Key Article

KEY WORDS

OCT, anterior segment imaging

CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS

There is currently a Local Coverage Determination (LCD) and related Article for scanning computerized ophthalmic diagnostic imaging. Please refer to the following LCD websites for Medicare Members:
https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=34380&ContrId=298&ver=35&ContrVer=1&CntrctrSelected=298*1&Cntrctr=298&name=National+Government+Services%2c+Inc.+(13201%2c+A+and+B+and+HHH+MAC%2c+J+-+K)&s=All&DocType=Active&bc=AggAAAQAAAAA&