

## Medical Coverage Policy | Optical Coherence Tomography of the Anterior Eye Segment



**EFFECTIVE DATE:** 02 | 17 | 2009

**POLICY LAST UPDATED:** 04 | 21 | 2015

### OVERVIEW

This policy relates only to the anterior eye segment and not the posterior segment, which is a covered service.

Optical coherence tomography (OCT) is a high-resolution method of imaging the ocular structures. OCT for the anterior eye segment is being evaluated as a non-invasive diagnostic and screening tool for the detection of angle closure glaucoma, to assess corneal thickness and opacity, evaluate pre-surgical and postsurgical anterior chamber anatomy, calculate intraocular lens power, guide surgery, assess complications following surgical procedures, and to image intracorneal ring segments. It is also being studied in relation to pathologic processes such as dry eye syndrome, tumors, uveitis, and infections.

### MEDICAL CRITERIA

Not applicable

### PRIOR AUTHORIZATION

Not applicable

### POLICY STATEMENT

#### BlueCHiP for Medicare

Anterior segment optical coherence tomography is medically necessary.

Medicare policy is developed separately from BCBSRI policy. Medicare policy incorporates consideration of governmental regulations from Centers for Medicare and Medicaid Services (CMS), such as national coverage determinations or local coverage determinations. In addition to benefit differences, CMS may reach different conclusions regarding the scientific evidence than does BCBSRI. Medicare and BCBSRI policies may differ. However, BlueCHiP for Medicare members must be offered, at least, the same services that Medicare offers.

#### Commercial Products

Scanning computerized ophthalmic (e.g., OCT) imaging of the anterior eye segment is not medically necessary as there is inadequate peer reviewed data to support its use.

### COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage or Subscriber Agreement for applicable benefits/coverage for diagnostic imaging services or for limitations when services are not medically necessary.

### BACKGROUND

OCT is a non-invasive method that creates an image of light reflected from the ocular structures. In this technique, a reflected light beam interacts with a reference light beam. The coherent (positive) interference between the 2 beams (reflected and reference) is measured by an interferometer, allowing construction of an image of the ocular structures. This method allows cross-sectional imaging at a resolution of 6 to 25 microns. The Stratus OCT™ (Carl Zeiss Meditec), which uses a 0.8-micron wavelength light source, was designed for evaluating the optic nerve head, retinal nerve fiber layer, and retinal thickness. The Zeiss Visante OCT™ and AC Cornea OCT (Ophthalmic Technologies) use a 1.3-micron wavelength light source designed specifically

for imaging the anterior eye segment. Light of this wavelength penetrates the sclera, allowing high-resolution cross-sectional imaging of the AC angle and ciliary body. The light is, however, typically blocked by pigment, preventing exploration behind the iris. Ultrahigh resolution OCT can achieve a spatial resolution of 1.3 microns, allowing imaging and measurement of corneal layers.

An early application of OCT technology was the evaluation of the cornea before and after refractive surgery. Because this is a noninvasive procedure that can be conducted by a technician, it has been proposed that this device may provide a rapid diagnostic and screening tool for the detection of angle closure glaucoma. In addition, the noncontact method eliminates patient discomfort and inadvertent compression of the globe. Also being investigated is the possibility that the 0.8-micron wavelength Stratus OCT, which is already available in a number of eye departments, may provide sufficient detail for routine clinical assessment of the AC angle in glaucoma patients. Add-on lens are also available for imaging the AS with OCT devices designed for posterior segment imaging.

It is not currently possible to determine the frequency of false positive results with OCT, therefore it cannot be determined whether health outcomes are improved. Since the impact on health outcomes of anterior segment OCT for angle closure glaucoma, as well as for other disorders of the anterior chamber, is not known, this procedure is considered not medically necessary.

Medicare considers anterior segment OCT to be reasonable and necessary for the following:

- Evaluate narrow angle, suspected narrow angle, mixed narrow and open angle glaucoma, and angle recession as all determined by gonioscopy
- Determine the proper intraocular lens for a patient who has had prior refractive surgery and now requires cataract extraction
- Evaluate Iris tumor
- Evaluate corneal edema or opacity that precludes visualization or study of the anterior chamber
- Calculate lens power for cataract patients who have undergone prior refractive surgery. (Reimbursement will only be made for the cataract codes as long as additional documentation is available in the patient record of the prior refractive procedure. Reimbursement will not be made in addition to A-scan or IOL master.)
- Evaluate and plan treatment for patients with diseases affecting the cornea, iris, lens and other anterior segment structures
- Provide additional information during the planning and follow-up for corneal, iris, cataract, glaucoma and other anterior segment surgeries

#### **CODING**

The following code is medically necessary for BlueCHiP for Medicare and not medically necessary for Commercial products:

**92132**

The following ICD-9 diagnosis codes are required for Medicare members and should be used in conjunction with CPT code 92132:

#### **ICD-9**



Optical Coherence  
Tomography ICD 9 C

#### **ICD-10**



Optical Coherence  
Tomography ICD 10 C

## RELATED POLICIES

Not applicable

## PUBLISHED

Provider Update, July 2015  
Provider Update, June 2014  
Provider Update, August 2013  
Provider Update, April 2012  
Provider Update, May 2011  
Provider Update, May 2010  
Provider Update, April 2009

## REFERENCES

1. National Government Services (NGS). Local Coverage Determination (LCD): Scanning Computerized Ophthalmic Diagnostic Imaging (SCODI) (L34187)
2. Wolffsohn JS, Peterson RC. Anterior ophthalmic imaging. 1. Clin Exp Optom 2006; 89(4):205-14.
3. Nolan WP, See JL, Chew PT et al. Detection of primary angle closure using anterior segment optical coherence tomography in Asian eyes. Ophthalmology 2007; 114(1):33-9.
4. Narayanaswamy A, Sakata LM, He MG et al. Diagnostic performance of anterior chamber angle measurements for detecting eyes with narrow angles: an anterior segment OCT study. Arch Ophthalmol 2010; 128(10):1321-7.
5. Pekmezci M, Porco TC, Lin SC. Anterior segment optical coherence tomography as a screening tool for the assessment of the anterior segment angle. Ophthalmic Surg Lasers Imaging 2009; 40(4):389-98.
6. Kaley-Landoy M, Day AC, Cordeiro MF et al. Optical coherence tomography in anterior segment imaging. Acta Ophthalmol Scand 2007; 85(4):427-30.
7. Garcia JP, Jr., Rosen RB. Anterior segment imaging: optical coherence tomography versus ultrasound biomicroscopy. Ophthalmic Surg Lasers Imaging 2008; 39(6):476-84.
8. Mansouri K, Sommerhalder J, Shaarawy T. 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 (Lond) 2010; 24(2):233-9.
9. Bianciotto C, Shields CL, Guzman JM et al. Assessment of anterior segment tumors with ultrasound biomicroscopy versus anterior segment optical coherence tomography in 200 cases. Ophthalmology 2011; 118(7):1297-302.
10. Jiang C, Li Y, Huang D et al. Study of anterior chamber aqueous tube shunt by fourier-domain optical coherence tomography. J Ophthalmol 2012; 2012:189580.
11. Cauduro RS, Ferraz Cdo A, Morales MS et al. Application of anterior segment optical coherence tomography in pediatric ophthalmology. J Ophthalmol 2012; 2012:313120.

**CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS**

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

