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

EFFECTIVE DATE: 01|01|2017
POLICY LAST UPDATED: 12|05|2017

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 non-invasive, high-resolution imaging method that can be used to visualize ocular structures. OCT of the anterior segment is being evaluated as a non-invasive diagnostic and screening tool for detecting angle-closure glaucoma, for presurgical evaluation, surgical guidance, and for assessing complications following surgical procedures. It is also being studied as a tool to evaluate the pathologic processes of dry eye syndrome, tumors, uveitis, and infections.

This policy is applicable to Commercial Products only. For Blue CHiP for Medicare, see related policy section.

MEDICAL CRITERIA
Not applicable

PRIOR AUTHORIZATION
Not applicable

POLICY STATEMENT
Commercial Products
Scanning computerized ophthalmic (e.g., OCT) imaging of the anterior eye segment is not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE
Benefits may vary between groups/contracts. Please refer to the appropriate Benefit Booklet, 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 µm. The Stratus OCT™ (Carl Zeiss Meditec), which uses a 0.8-µm wavelength light source, was designed for evaluating the optic nerve head, retinal nerve fiber layer, and retinal thickness in the posterior segment. The Zeiss Visante OCT™ and AC Cornea OCT (Ophthalmic Technologies) use a 1.3-µm 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 µm, 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. Glaucoma is characterized by degeneration of the optic nerve. The classification of glaucoma as open angle or angle closure relies on assessment of the anterior segment anatomy, particularly that of the AC angle. Angle closure glaucoma is characterized by obstruction of aqueous fluid drainage through the trabecular meshwork (the primary fluid egress site) from the eye's AC. The width of the angle is a factor affecting the drainage of aqueous humor. A wide unobstructed iridocorneal angle allows sufficient drainage of aqueous humor, whereas a narrow angle may impede the drainage system and leave the patient susceptible to an increase in IOP and angle-closure glaucoma.

A comprehensive ophthalmologic examination for glaucoma includes assessment of the optic nerve and retinal nerve fiber layer, evaluation of visual fields, and measurement of ocular pressure. The presence of characteristic changes in the optic nerve or abnormalities in visual field, together with increased intraocular pressure (IOP), is sufficient for a definitive diagnosis of glaucoma.

Alternative methods of evaluating the AC are slit-lamp biomicroscopy or UBM. Slit lamp biomicroscopy is typically used to evaluate the AC; however, the chamber angle can only be examined with specialized lenses, the most common of these being the gonioscopic mirror. In this procedure, a gonio lens is applied to the surface of the cornea, which may result in distortion of the globe. Ultrasonography may also be used for imaging the anterior eye segment. Ultrasonography uses highfrequency mechanical pulses (10-20 MHz) to build a picture of the front of the eye. An ultrasound scan along the optical axis assesses corneal thickness, AC depth, lens thickness, and axial length. Ultrasound scanning across the eye creates a 2-dimensional image of the ocular structures. It has a resolution of 100 μm but only moderately high intraobserver and low interobserver reproducibility. Ultrasound biomicroscopy (50 MHz) has a resolution of 30 to 50 μm. As with slit-lamp biomicroscopy with a gonioscopic mirror, this technique requires placement of a probe under topical anesthesia.

Based on the evaluation of the clinical utility of Anterior Segment Optical Coherence Tomography, the current evidence is insufficient to determine the effects of the technology on health outcomes. Therefore, the service is considered not medically necessary.

CODING

Commercial Products

The following code is considered not medically necessary:

92132 Scanning computerized ophthalmic diagnostic imaging, anterior segment, with interpretation and report, unilateral or bilateral

RELATED POLICIES

BlueCHiP for Medicare National and Local Coverage Determinations Policy
Ophthalmologic Techniques for Evaluating Glaucoma

PUBLISHED

Provider Update, February 2018
Provider Update, January 2017
Provider Update, July 2015
Provider Update, June 2014
Provider Update, August 2013
Provider Update, April 2012
Provider Update, May 2011

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