# LCD - Scanning Computerized Ophthalmic Diagnostic Imaging (L35038)

Links in PDF documents are not guaranteed to work. To follow a web link, please use the MCD Website.

# **Contractor Information**

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
Novitas Solutions, Inc.	A and B MAC	04111 - MAC A	J - H	Colorado
Novitas Solutions, Inc.	A and B MAC	04112 - MAC B	J - H	Colorado
Novitas Solutions, Inc.	A and B MAC	04211 - MAC A	J - H	New Mexico
Novitas Solutions, Inc.	A and B MAC	04212 - MAC B	J - H	New Mexico
Novitas Solutions, Inc.	A and B MAC	04311 - MAC A	J - H	Oklahoma
Novitas Solutions, Inc.	A and B MAC	04312 - MAC B	J - H	Oklahoma
Novitas Solutions, Inc.	A and B MAC	04411 - MAC A	J - H	Texas
Novitas Solutions, Inc.	A and B MAC	04412 - MAC B	J - H	Texas
Novitas Solutions, Inc.	A and B MAC	04911 - MAC A	J - H	Colorado New Mexico Oklahoma Texas
Novitas Solutions, Inc.	A and B MAC	07101 - MAC A	J - H	Arkansas
Novitas Solutions, Inc.	A and B MAC	07102 - MAC B	J - H	Arkansas
Novitas Solutions, Inc.	A and B MAC	07201 - MAC A	J - H	Louisiana
Novitas Solutions, Inc.	A and B MAC	07202 - MAC B	J - H	Louisiana
Novitas Solutions, Inc.	A and B MAC	07301 - MAC A	J - H	Mississippi
Novitas Solutions, Inc.	A and B MAC	07302 - MAC B	J - H	Mississippi
Novitas Solutions, Inc.	A and B MAC	12101 - MAC A	J - L	Delaware
Novitas Solutions, Inc.	A and B MAC	12102 - MAC B	J - L	Delaware
Novitas Solutions, Inc.	A and B MAC	12201 - MAC A	J - L	District of Columbia
Novitas Solutions, Inc.	A and B MAC	12202 - MAC B	J - L	District of Columbia
Novitas Solutions, Inc.	A and B MAC	12301 - MAC A	J - L	Maryland
Novitas Solutions, Inc.	A and B MAC	12302 - MAC B	J - L	Maryland
Novitas Solutions, Inc.	A and B MAC	12401 - MAC A	J - L	New Jersey
Novitas Solutions, Inc.	A and B MAC	12402 - MAC B	J - L	New Jersey
Novitas Solutions, Inc.	A and B MAC	12501 - MAC A	J - L	Pennsylvania
Novitas Solutions, Inc.	A and B MAC	12502 - MAC B	J - L	Pennsylvania

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
Novitas Solutions, Inc.	A and B MAC	12901 - MAC A	J - L	Delaware
				District of Columbia
				Maryland
				New Jersey
				Pennsylvania

## **LCD Information**

## **Document Information**

LCD ID

L35038

**LCD Title** 

Scanning Computerized Ophthalmic Diagnostic Imaging

**Proposed LCD in Comment Period** 

N/A

**Source Proposed LCD** 

**DL35038** 

**Original Effective Date** 

For services performed on or after 10/01/2015

**Revision Effective Date** 

For services performed on or after 10/31/2019

**Revision Ending Date** 

N/A

**Retirement Date** 

N/A

**Notice Period Start Date** 

12/07/2017

**Notice Period End Date** 

01/24/2018

## **CMS National Coverage Policy**

This LCD supplements but does not replace, modify or supersede existing Medicare applicable National Coverage Determinations (NCDs) or payment policy rules and regulations for scanning computerized ophthalmic diagnostic

# AMA CPT / ADA CDT / AHA NUBC Copyright Statement

CPT codes, descriptions and other data only are copyright 2020 American Medical Association. All Rights Reserved. Applicable FARS/HHSARS apply.

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.

Current Dental Terminology  $\ @$  2020 American Dental Association. All rights reserved.

Copyright © 2013 - 2021, the American Hospital Association, Chicago, Illinois. Reproduced by CMS with permission. No portion of the American Hospital Association (AHA) copyrighted materials contained within this publication may be copied without the express written consent of the AHA. AHA copyrighted materials including the UB-04 codes and descriptions may not be removed, copied, or utilized within any software, product, service, solution or derivative work without the written consent of the AHA. If an entity wishes to utilize any AHA materials, please contact the AHA at 312-893-6816. Making copies or utilizing the content of the UB-04 Manual, including the codes and/or descriptions, for internal purposes, resale and/or to be used in any product or publication; creating any modified or derivative work of the UB-04 Manual and/or codes and descriptions; and/or making any commercial use of UB-04 Manual or any portion thereof, including the codes and/or descriptions, is only authorized with an express license from the American Hospital Association. To license the electronic data file of UB-04 Data Specifications, contact Tim Carlson at (312) 893-6816. You may also contact us at ub04@aha.org.

imaging services. Federal statute and subsequent Medicare regulations regarding provision and payment for medical services are lengthy. They are not repeated in this LCD. Neither Medicare payment policy rules nor this LCD replace, modify or supersede applicable state statutes regarding medical practice or other health practice professions acts, definitions and/or scopes of practice. All providers who report services for Medicare payment must fully understand and follow all existing laws, regulations and rules for Medicare payment for scanning computerized ophthalmic diagnostic imaging services and must properly submit only valid claims for them. Please review and understand them and apply the medical necessity provisions in the policy within the context of the manual rules. Relevant CMS manual instructions and policies may be found in the following Internet-Only Manuals (IOMs) published on the CMS Web site:

#### **IOM Citations:**

- CMS IOM Publication 100-03, Medicare National Coverage Determinations (NCD) Manual
  - Chapter 1, Part 1 Sections 80.2 Photodynamic Therapy, 80.2.1 Ocular Photodynamic Therapy (OPT), 80.3 Photosensitive Drugs, 80.3.1 Verteporfin, 80.6 Intraocular Photography, and 80.9 Computer Enhanced Perimetry
  - Chapter 1, Part 2 Section 140.5 Laser Procedures
  - Chapter 1, Part 4 Section 220.1 Computed Tomography (CT)
- CMS IOM Publication 100-08, Medicare Program Integrity Manual
  - Chapter 13, Local Coverage Determinations, Section 13.5.4 Reasonable and Necessary Provision in an LCD

## Social Security Act (Title XVIII) Standard References:

- Title XVIII of the Social Security Act, Section 1862(a)(1)(A) states that no Medicare payment may be made for items or services which are not reasonable and necessary for the diagnosis or treatment of illness or injury.
- Title XVIII of the Social Security Act, Section 1862(a)(7). This section excludes routine physical examinations.

## **Coverage Guidance**

## Coverage Indications, Limitations, and/or Medical Necessity

Compliance with the provisions in this policy may be monitored and addressed through post payment data analysis and subsequent medical review audits.

## History/Background and/or General Information

## Glaucoma

Glaucoma is a leading cause of blindness, and a disease for which treatment methods clearly are available and in common use. Scanning computerized ophthalmic diagnostic imaging (SCODI) allows for early detection of glaucomatous damage to the nerve fiber layer or optic nerve of the eye. It is the goal of these diagnostic imaging tests to discriminate among patients with normal intraocular pressure (IOP) who have glaucoma, patients with elevated IOP who do not have glaucoma. These tests can also provide precise methods of observation of the optic nerve head and can more accurately reveal subtle glaucomatous changes over the course of follow-up exams than visual field and/or disc photos. This can allow earlier and more efficient treatment of the disease process. The severity of glaucoma damage can be estimated as mild, moderate, severe or indeterminate.

## **Retinal Disorders**

Retinal disorders are the most common causes of severe and permanent vision loss. SCODI is a valuable tool for the

evaluation and treatment of patients with retinal disease, especially macular abnormalities. SCODI is able to detail the microscopic anatomy of the retina and the vitreo-retinal interface. SCODI is useful to measure the effectiveness of therapy, in determining the need for ongoing therapy, or cessation of therapy.

The retina is a complex tissue in the back of the eye that contains specialized photoreceptor cells called rods and cones. The photoreceptors connect to a network of nerve cells for the local processing of visual information. This information is sent to the brain for decoding into a visual image. The adjacent retinal pigment epithelium (RPE) supports many of the retina's metabolic functions.

The retina is susceptible to a variety of diseases, including age-related macular degeneration (AMD), diabetic retinopathy (DR), retinitis pigmentosa (RP) and other inherited retinal degenerations, uveitis, retinal detachment, and eye cancers. Each of these can lead to visual loss or complete blindness.

The leading cause of visual loss among elderly persons is AMD, which has an increasingly important social and economic impact in the United States. As the size of the elderly population increases in this country, AMD will become a more prevalent cause of blindness than both DR and glaucoma combined.

DR is also a major cause of blindness. In the proliferative stage of the disease, newly formed, abnormal blood vessels can break through the retinal surface and hemorrhage into the normally transparent, gelatin-like vitreous in the middle of the eye. Scar tissue may subsequently form and pull the retina away from the back of the eye, causing a retinal detachment to occur.

Rare inherited retinal degenerations, typified by RP, result in the destruction of photoreceptor cells and the RPE.

Clinical evidence has shown that long-term use of chloroquine (CQ) and/or hydroxychloroquine (HCQ) can lead to irreversible retinal toxicity. SCODI may be indicated to provide monitoring of patients for the development of retinopathy during long-term therapy.

#### **SCODI Techniques**

There are several forms of SCODI tests that currently exist. SCODI testing includes scanning laser polarimetry (SLP), optical coherence tomography (OCT), and confocal scanning laser ophthalmoscopy (CSLO). These testing devices use videographic digitized images to make quantitative topographic measurements of the optic nerve head and surrounding retina. Although these techniques are different, their objective is the same. These methods are described below:

## • Scanning Laser Polarimetry (SLP)

The retinal nerve fiber layer (RNFL) is birefringent, causing a change in the state of polarization of a laser beam as it passes. A 780-nm diode laser is used to illuminate the optic nerve. The polarization state of the light emerging from the eye is then evaluated and correlated with RNFL thickness. Unlike CSLO, SLP can directly measure the thickness of the RNFL. GDx® is a common example of a scanning laser polarimeter. GDx® contains a normative database and statistical software package to allow comparison to age-matched normal subjects of the same ethnic origin. The advantages of this system are that images can be obtained without pupil dilation, and evaluation can be done in about 10 minutes. Current instruments have added enhanced and variable corneal compensation technology to account for corneal polarization.

## • Optical Coherence Tomography (OCT)

OCT uses near-infrared light to provide direct cross-sectional measurement of the retinal nerve fiber layer. The principals employed are similar to those used in B-mode ultrasound except light, not sound, is used to produce the 3-dimensional images. The light source can be directed into the eye through a conventional slit-lamp biomicroscope and focused onto the retina through a typical 78-diopter lens. This system requires dilation of the patient's pupil.

## • Confocal Scanning Laser Ophthalmoscopy (CSLO)

CSLO is a laser-based image acquisition technique, which is intended to improve the quality of the examination compared to standard ophthalmologic examination. A laser is scanned across the retina along with a detector system. Only a single spot on the retina is illuminated at any time, resulting in a high-contrast image of great reproducibility that can be used to estimate the thickness of the RNFL. In addition, this technique does not require maximal mydriasis, which may be a problem in patients with glaucoma. The Heidelberg Retinal Tomograph is probably the most common example of this technology.

#### **Covered Indications**

**Anterior segment SCODI** will be considered medically reasonable and necessary for evaluation of specified forms of glaucoma and certain disorders of the cornea, iris and ciliary body.

**Posterior segment SCODI** will be considered medically reasonable and necessary under the following circumstances:

- 1. For the diagnosis and management of a patient who has mild, moderate, severe, or indeterminate stage glaucoma or who is suspected of having glaucoma.
- 2. Monitoring patients being treated with chloroquine (CQ) and/or hydroxychloroquine (HCQ) for the development of retinopathy.
- 3. The evaluation and treatment of patients with conditions affecting the optic nerve (e.g., optic neuropathy) or retinal disease (e.g., macular degeneration, diabetic retinopathy) and in the evaluation and treatment of certain macular abnormalities (e.g., macular edema, atrophy associated with degenerative retinal diseases).

#### Limitations

The following are considered not medically reasonable and necessary:

- SCODI is usually not medically reasonable and necessary when performed to provide additional confirmatory
  information regarding a diagnosis which has already been determined. Documentation should support that the
  SCODI test result was used for establishing a diagnosis, establishing a baseline prior to treatment, or for
  monitoring purposes.
- 2. Fundus photography and posterior segment SCODI performed on the same eye on the same day are generally mutually exclusive of one another (*National Correct Coding Initiative [NCCI] Policy Manual for Medicare Services*). The provider is not precluded from performing both on the same eye on the same day when each service is necessary to evaluate and treat the patient. The medical record should clearly document the medical necessity of each service. Frequent reporting of these services together may trigger focused medical review.
- 3. Screening (patient without signs or symptoms) for any condition is not medically reasonable and necessary.

## Place of Services (POS)

For additional information on services performed in an Independent Diagnostic Testing Facility (IDTF), please refer to Local Coverage Determination (LCD) L35448 Independent Diagnostic Testing Facility (IDTF).

For frequency limitations, please refer to the Utilization Guidelines section below.

**Notice:** Services performed for any given diagnosis must meet all of the indications and limitations stated in this policy, the general requirements for medical necessity as stated in CMS payment policy manuals, any and all existing

CMS national coverage determinations, and all Medicare payment rules.

## **Summary of Evidence**

Scanning computerized ophthalmic diagnostic imaging (SCODI) allows for the early detection of glaucomatous damage to the nerve fiber layer or optic nerve and has demonstrated clinical utility in facilitating earlier diagnosis and treatment as well as monitoring for progression and response to treatment. Evidence-based guidelines (2015 Academy of Ophthalmology [AAO] Preferred Practice Pattern [PPP] on Primary Open-Angle Glaucoma and 2010 American Optometric Association [AOA] Optometric Clinical Practice Guideline on Care of the Patient with Open Angle Glaucoma) identify SCODI as one technique that may be used to examine the optic nerve head (ONH) and/or retinal nerve fiber layer (RNFL). SCODI is often used to provide quantitative information to supplement the clinical exam of the optic nerve. SCODI is widely used in the posterior segment, whereas in the anterior segment, the use is still limited.

The evidence-based guideline from the AAO (2015 AAO PPP on Primary Angle Closure) indicates that anterior segment imaging should be considered when angle anatomy is difficult to assess on gonioscopy. There is good evidence demonstrating general agreement between findings on gonioscopy and anterior segment imaging, including ultrasound biomicroscopy and anterior segment optical coherence tomography (AS-OCT). However, AS-OCT is limited to evaluating the iridocorneal angle. AS-OCT is one technology that may prove useful in evaluating secondary causes of angle closure and elucidating plateau iris.

SCODI is also a valuable tool for the evaluation of patients with retinal disease, especially those with macular abnormalities. SCODI is often used in conjunction with clinical examination of the eye. It is at times used as a baseline and also used in monitoring for progression or response to treatment. The clinical utility of OCT imaging in retinal conditions has been demonstrated as providing an objective, accurate assessment of the amount and location of retinal thickening. Evidence-based guidelines from the AAO (PPP Diabetic Retinopathy [2016] and the PPP Idiopathic Macular Hole [2014, updated 2017]) support that in clinical practice, decisions are often based on OCT findings.

Finally, Marmor et al (AAO Statement 2016) published recommendations on screening patients who are being treated with Chloroquine and Hydroxychloroquine. A baseline test is performed and then ongoing monitoring at regular intervals is recommended. Marmor et al recommends beginning annual screening after 5 years for patients on acceptable doses of chloroquine or hydroxychloroquine and without any major risk factors.

Multiple sources of literature were submitted for consideration of posterior SCODI for advanced (severe) stage glaucoma and anterior SCODI to examine the structures of the anterior segment of the eye.

In an observational case study, Leite et al (2010) looked at 99 patients with glaucomatous eyes and 47 control patients. The severity of disease was graded using the visual field index (VFI) from standard automated perimetry. The authors looked to determine if disease severity had any impact on the diagnostic accuracy of OCT. The average VFI for the glaucomatous eyes was 85.5% and for the control eyes was 99.4% indicating very minimal visual field loss. The results show that for those with mild disease (VFI near 100%) the sensitivity of OCT was 47% and the specificity was 95%. For those patients with a VFI of 70%, the sensitivity increased to 84% and the specificity was 95%.

Bowd et al (2017) published a study that looked to estimate the measurement floors for spectral-domain optical coherence tomography (SD-OCT) measurements (minimum rim width [MRW], ganglion cell-inner plexiform layer thickness [GC-IPLT], and circumpapillary retinal nerve fiber layer thickness [cpRNFLT]) and compared global change over time in advanced glaucoma eyes. The study included a variability group of 41 eyes of 27 glaucoma patients with

moderate to advanced glaucoma to estimate the measurement floors and 87 eyes of 59 patients with advanced to severe glaucoma in a longitudinal group. Average structural loss of MRW, macular GC-IPLT, and cpRNFLT in the variability group eyes (over 5 weeks of follow- up) and the longitudinal group eyes (over 2 years of follow-up) was presented. The results indicated the mean percentage of image area that did not reach the floor in the baseline images of eyes in the longitudinal group (i.e., the image percentage that changed after 2 years of follow-up) was 19% for MRW, 36% for GC-IPLT, and 14% for cpRNFLT, indicating that GC-IPLT likely is the most robust measurement for assessing localized change in eyes with advanced glaucoma eyes. Authors concluded that a significant percentage of SD-OCT-measured retinal tissue is spared from the measurement floor in advanced glaucoma eyes. In addition, progressive thinning of the spared tissue is observable well into late-stage disease, particularly when GC-IPLT is the structural parameter measured. These results indicate that optical imaging, particularly SD-OCT imaging, has a place in detecting structural change in eyes with advanced glaucoma.

Belghith et al (2016) did a study is to compare SD-OCT standard structural measures MRW, ganglion cell-inner plexiform layer (GC-IPL), and cpRNFL and a new three-dimensional (3D) volume optic nerve head (ONH) change detection method for detecting change over time in severely advanced-glaucoma (open-angle glaucoma [OAG]) patients. The study included three groups of participants. The first group was composed of 35 eyes of 35 advanced-glaucoma patients followed for an average of 3.5 years. The stable glaucoma group consisted of 50 eyes from 27 early-, moderate-, and advanced-glaucoma patients with five serial OCT exams imaged every week for 5 weeks. A third group of 46 eyes from 30 healthy subjects followed for an average of 2.8 years was used to estimate the aging effects. Results suggest that even in very advanced glaucoma, structural loss can be detected in some eyes using standard global structural measures. Specifically, macular GC-IPL had the highest proportion of eyes with detectable change (31%), followed by MRW (11%) and cpRNFL (4%). In addition, the 3D whole-volume Bayesian-kernel detection scheme (BKDS) change method, which does not require extensive retinal layer segmentation, detected change in 37% of eyes. The authors concluded the results suggest that even in very advanced disease, structural change can be detected, and that monitoring macular GC-IPL and 3D whole-volume patients BKDS change shows promise for identifying progression in advanced glaucoma. However, a larger sample of advanced-glaucoma patients with longer follow-up is needed to validate these findings.

In a retrospective case note review, Hau et al (2015) compared AS-OCT with ultrasound B-scan (USB) in evaluating iris and iridociliary body lesions. Patients with other anterior or posterior segment lesions or tumors were excluded from this study. The study included 126 patients (126 eyes), the mean age of the patient group was 57.8, who were imaged with both AS-OCT and USB presenting to the same ocular oncology center over a 2 year period of time. The three most common diagnoses were iris naevi, iris pigment epithelial cysts, and iris melanoma. The aim of the study was to evaluate which imaging modality (AS-OCT vs. USB) provided better visualization and characterization of a large cohort of iris and iridociliary body lesions. High-frequency ultrasound biomicroscopy (UBM) was not included in this study, but was referenced as having some distinct advantages over USB and AS-OCT as well as limitations on use. The results revealed that USB was better than AS-OCT in visualizing all tumor margins, posterior tumor margin, and producing less posterior shadowing. USB was slightly better for resolving the overall tumor and posterior tumor surface, but AS-OCT was better for resolving the anterior and lateral tumor surface. In total, AS-OCT was able to detect more lesions than USB, especially in imaging iris lesions, but it was unable to detect any of the ciliary body lesions. The authors concluded that AS-OCT is superior to USB for imaging small lesions pertaining to the anterior iris but USB is better for imaging larger iris lesions with posterior or ciliary body extension.

Janssens et al (2016) conducted a systematic review to determine how accurate AS-OCT and UBM are in determining tumor margins and tumor depth of conjunctival and corneal tumors and if either of these techniques can provide additional information regarding the diagnosis. Fourteen sources were selected to analyze corneal and conjunctival tumor thickness and internal characteristics and extension in depth and size and shape measured by either of these two noninvasive techniques, AS-OCT or UBM, or a combination of both. The study designs included retrospective analysis, retrospective interventional case series, retrospective non-interventional case series, prospective studies, and unknown study designs. The number of patients in articles using UBM (alone) in conjunctival and corneal tumors totaled 44, the number of patients in articles using AS-OCT (alone) in conjunctival and corneal tumors totaled 211

(212 eyes), and the number of patients in articles using both UBM and AS-OCT in conjunctival and corneal tumors totaled 235 (238 tumors). The results show that both AS-OCT and UBM imaging techniques provide useful information about the internal features, extension, size, and shape of tumors. There is not enough evidence on the advantages and disadvantages of AS-OCT and UBM in certain tumor types. The authors concluded that more comparative studies are needed to investigate which imaging technique is most suitable for a certain tumor type.

## **Analysis of Evidence (Rationale for Determination)**

The clinical utility of SCODI has been established and validated in evidence-based guidelines and literature for early detection of glaucomatous damage to the retinal nerve fiber layer or optic disc, differentiation and diagnosis of other disorders of the optic nerve as well as monitoring for progressive optic neuropathy, monitoring retinal conditions, and drug-related ocular toxicity.

A number of studies have been published to evaluate the usefulness of posterior OCT for individuals with advanced glaucomatous damage as well as the potential applications of anterior segment OCT (AS-OCT and SD-OCT with anterior segment imaging capabilities) to image and provide measurements of anterior segment structures in a number of clinical situations. Overall, these studies have small sample sizes, relatively limited follow-up, and no documentation of improved health outcomes in the Medicare population. Some of the studies have populations that would not be generalizable to the Medicare population.

## **General Information**

#### **Associated Information**

Please refer to the related Local Coverage Article: Billing and Coding: Scanning Computerized Ophthalmic Diagnostic Imaging (SCODI), A57600, for all coding information.

#### **Documentation Requirements**

- 1. All documentation must be maintained in the patient's medical record and made available to the contractor upon request.
- 2. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, dates of service[s]). The documentation must include the legible signature of the physician or non-physician practitioner responsible for and providing the care to the patient.
- 3. The submitted medical record must support the use of the selected ICD-10-CM code(s). The submitted CPT/HCPCS code must describe the service performed.
- 4. Medical record must include the test results, comparison with prior tests when applicable, computer analysis of the data, and appropriate data storage for future comparison in follow-up exams.
- 5. If applicable, medical record documentation must clearly indicate the rationale which supports the medical necessity for performing the fundus photography and posterior segment SCODI on the same day on the same eye. Documentation should also reflect how the test results were used in the patient's plan of care.
- 6. If bilateral studies are performed, the documentation maintained by the provider must demonstrate medical need for the performance of the test for each eye.
- 7. When reporting other long term (current) drug therapy, the medical record must reflect the medication administered as well as the underlying condition for which it was given.

## **Utilization Guidelines**

In accordance with CMS Ruling 95-1 (V), utilization of these services should be consistent with locally acceptable standards of practice.

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

• No more than two (2) exams per year will be considered medically reasonable and necessary for covered indications.

Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; optic nerve:

• No more than two (2) exams per year will be considered medically reasonable and necessary for the patient who has or is suspected of having glaucoma.

Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; retina:

- No more than one (1) exam every two (2) months will be considered medically reasonable and necessary to manage the patient whose primary ophthalmological condition is related to a retinal disease that is not undergoing active treatment.\*
- \* Note: Please see next bullet if undergoing active treatment.
  - No more than one (1) exam per month will be considered medically reasonable and necessary to manage the
    patient with retinal conditions undergoing active treatment, or in conditions suggestive of rapid deterioration.
    These conditions include wet AMD, choroidal neovascularization, macular edema, diabetic retinopathy
    (proliferative and non-proliferative), branch retinal vein occlusion, central retinal vein occlusion, and cystoid
    macular edema.
    - In addition, other conditions which may undergo rapid clinical changes monthly requiring aggressive therapy and frequent follow-up (e.g., macular hole and traction retinal detachment) may also require monthly scans.

With the development of treat and extend protocols for patients with wet AMD treated with antiangiogenic drugs, it is expected that SCODI (unilateral or bilateral) will be used for therapeutic decision making and utilized at maximum of monthly with subsequent less frequency based on the patient treatment protocol and patient response as documented in the medical record.

• No more than one (1) exam per year will be considered medically reasonable and necessary for patients being treated with CQ and/or HCQ. These patients should receive a baseline examination within the first year of treatment and as an annual follow-up after five years of treatment. For higher-risk patients, annual testing may begin immediately (without a 5-year delay).

#### **Sources of Information**

Contractor is not responsible for the continued viability of websites listed.

### **Bibliography**

Aetna Clinical Policy Bulletin Number 0749. Anterior Segment Scanning Computerized Ophthalmic Diagnostic Imaging. Effective 03/21/2008, Last review 10/13/2016. Last Accessed 05/01/2017 at http://www.aetna.com/cpb/medical/data/700 799/0749.html

American Academy of Ophthalmology (AAO). Cataract in the Adult Eye. Preferred Practice Pattern. San Francisco, CA: AAO; 2016. Last Accessed 05/01/2017 at https://www.aao.org/preferred-practice-pattern/cataract-in-adult-eye-ppp-2016

American Academy of Ophthalmology (AAO), Glaucoma Panel. Primary Angle Closure. Preferred Practice Pattern. San Francisco, CA: AAO; 2015. Last Accessed 05/01/2017 https://www.aao.org/preferred-practice-pattern/primary-angle-closure-ppp-2015

American Academy of Ophthalmology (AAO), Glaucoma Panel. Primary Open-Angle Glaucoma. Preferred Practice Pattern. San Francisco, CA: AAO; 2015. Last Accessed 05/01/2017 http://www.aaojournal.org/article/S0161-6420(15)01276-2/pdf.

American Academy of Ophthalmology (AAO), Glaucoma Panel. Primary Open-Angle Glaucoma Suspect. Preferred Practice Pattern. San Francisco, CA: AAO; 2015. Last Accessed 05/01/2017 http://www.aaojournal.org/article/S0161-6420(15)01278-6/pdf.

American Academy of Ophthalmology Retina/Vitreous Panel. Preferred Practice Pattern® Guidelines. Idiopathic Macular Hole. San Francisco, CA: American Academy of Ophthalmology; 2014 (updated 2017). Available at: www.aao.org/ppp.

American Academy of Ophthalmology (AAO), Retina/Vitreous Panel. Diabetic Retinopathy. Preferred Practice Pattern. San Francisco, CA: AAO; Updated 2016. Last Accessed 05/01/2017 https://www.aao.org/preferred-practice-pattern/diabetic-retinopathy-ppp-updated-2016

American Academy of Ophthalmology. Web Extra: CPT code 92133 (SCODI). EyeNet Magazine. June 2015. Accessed at https://www.aao.org/eyenet

American Glaucoma Society and American Academy of Ophthalmology. Glaucoma Stage Definitions. Glaucoma Quick Reference Guide. Revised 02/17/2015.

American Optometric Association (AOA), Optometric Clinical Practice Guideline. Care of the Patient with Open Angle Glaucoma. St. Louis, MO: revised 2010.

American Optometric Association (AOA), Optometric Clinical Practice Guideline. Care of the Patient with Primary Angle Closure Glaucoma. St. Louis, MO: revised 1998.

Angmo D, Nongpiur ME, Sharma R, et al. Clinical utility of anterior segment swept-source optical coherence tomography in glaucoma. *Oman J Ophthalmol*. 2016 Jan-Apr;9(1):3-10.

Bakri SJ, Berrocal A, Capone A, et al. Posterior Vitreous Detachment. Retinal Health Series – Facts from the ASRS. The Foundation American Society of Retina Specialists. 2016. savingvision.org.

Belghith A, Medeiros FA, Bowd C, et al. Structural Change Can Be Detected in Advanced-Glaucoma Eyes. Invest

Ophthalmol Vis Sci.2016 Jul 1;57(9):OCT511-8.

Bowd C, Zangwill LM, Weinreb RN, et al. Estimating Optical Coherence Tomography Structural Measurement Floors to Improve Detection of Progression in Advanced Glaucoma. *Am J Ophthalmol*. 2017 Mar;175:37-44.

Chen Y, Qian Y, Lu P. Iridoschisis: a case report and literature review. BMC Ophthalmol. 2017 Mar 14;17(1):24.

de Moraes CG, Liebmann JM, Medeiros FA, et al. Management of advanced glaucoma: Characterization and monitoring. *Surv Ophthalmol*. 2016 Sep-Oct;61(5):597-615.

Fernandez-Vigo JI, Fernandez-Vigo C, Martinez de la Casa JM, et al. Identification of iridocorneal angle structures assessed by Fourier domain optical coherence tomography. *Arch Soc Esp Oftalmol*. 2016 Feb;91(2):74-80.

Florida Blue Medical Coverage Guideline 01-92000-17 Scanning Computerized Ophthalmic Diagnostic Imaging; effective 04/17/2000; revised 10/01/2016.

Han SB, Liu YC, Noriega KM, et al. Applications of Anterior Segment Optical Coherence Tomography in Cornea and Ocular Surface Diseases. *J Ophthalmol*. 2016;2016:4971572.

Hau SC, Papastefanou V, Shah S, 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.

Janssens K, Martens M, Lauwers N, et al. To Study and Determine the Role of Anterior Segment Optical Coherence Tomography and Ultrasound Biomicroscopy in Corneal and Conjunctival Tumors. *J Ophthalmol*. 2016;1048760. doi: 10.1155/2016/1048760. Epub 2016 Dec 6.

Kim KE, Oh S, Jeoung JW, et al. Spectral-domain Optical Coherence Tomography in Manifest Glaucoma: Its Additive Role in Structural Diagnosis. *Am J Ophthalmol.* 2016 Nov;171:18-26.

Kreda SH. Diagnosis and Management of Optic Disc Elevation. Optometric Management. 2009. Accessed at http://www.optometricmanagement.com/issues/2009/june-2009/diagnosis-and-management-of-optic-disc-elevation

Leite MT, Zangwill LM, Weinreb RN, et al. Effect of Disease Severity on the Performance of Cirrus Spectral-Domain OCT for Glaucoma Diagnosis. *Invest Ophthalmol Vis Sci.* 2010 Aug;51(8):4104-4109.

Marmor MF, Kellner U, Lai TY, et al. American Academy of Ophthalmology. Recommendations on screening for Chloroquine and Hydroxychloroquine retinopathy (2016 Revision). *Ophthalmology*. 2016 Jun;123(6):1386-1394.

National Institutes of Health (NIH), National Eye Institute (NEI). Retinal Disease Program – National Plan for Eye and Vision Research [NEI Strategic Planning]. Accessed at https://nei.nih.gov/strategicplanning/np\_retinal

Nongpiur, ME, Aboobakar IF, Baskaran M, et al. Association of Baseline Anterior Segment Parameters With the Development of Incident Gonioscopic Angle Closure. *JAMA Ophthalmol*.2017 Mar 1;135(3)252-258.

Rao HL, Addepalli UK, Chaudhary S, et al. Ability of different scanning protocols of spectral domain optical coherence tomography to diagnose preperimetric glaucoma. *Invest Ophthalmol Vis Sci.* 2013 Nov 1;54(12):7252-7.

Rao HL, Yadav RK, Addepalli UK, et al. Comparing spectral-domain optical coherence tomography and standard automated perimetry to diagnose glaucomatous optic neuropathy. *J Glaucoma*. 2015 Jun-Jul;24(5):e69-74.

Suda K, Hangai M, Akagi T, et al. Comparison of Longitudinal Changes in Functional and Structural Measures for Evaluating Progression of Glaucomatous Optic Neuropathy. *Invest Ophthalmol Vis Sci.* 2015 Aug; 56(9):5477-84.

Thomas BJ, Galor A, Nanji AA, et al. Ultrahigh-resolution anterior segment optical coherence tomography in the diagnosis and management of ocular surface squamous neoplasia. *Ocul Surf.* 2014 Kam;12(1):46-58.

Tun TA, Baskaran M, Tan SS, et al. Evaluation of the Anterior Segment Angle-to-Angle Scan of Cirrus High-Definition Optical Coherence Tomography and Comparison With Gonioscopy and With the Visante OCT. *Invest Ophthalmol Vis Sci.* 2017 Jan;58(1):59-64.

Xu BY, Israelsen P, Pan BX, et al. Benefit of Measuring Anterior Segment Structures Using an Increased Number of Optical Coherence Tomography Images: The Chinese American Eye Study. *Invest Ophthalmol Vis Sci.* 2016 Nov; 57(14):6313-6319.

#### Other Contractor Policies

First Coast Service Options, Inc. Local Coverage Determination (LCD): Scanning Computerized Ophthalmic Diagnostic Imaging (L33751).

National Government Services, Inc. Local Coverage Determination (LCD): Scanning Computerized Ophthalmic Diagnostic Imaging (SCODI) (L34380).

## Contractor Medical Directors

Novitas Solutions, Inc. Local Coverage Determination (LCD): Scanning Computerized Ophthalmic Diagnostic Imaging (L35038) with effective dates prior to 01/25/2018.

# **Revision History Information**

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
10/31/2019	R11	LCD revised and published on 12/16/2021 in response to an inquiry. Utilization guidelines clarified to make it clear that the patient with conditions suggestive of rapid deterioration and other rapid clinical changes may have monthly exams. Minor formatting changes made throughout the LCD.	• Other (Inquiry)
10/31/2019	R10	LCD revised and published on 10/31/2019. Consistent with CMS Change Request 10901, the entire coding section has been removed from the LCD and placed into the related Billing and Coding Article, A57600. All CPT codes and coding information within the text of the LCD has been	• Other (CMS Change Request 10901)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		placed in the Billing and Coding Article.	
04/18/2019	R9	LCD revised and published on 04/18/2019 in response to CMS Change Request (CR) 10901 to add CMS IOM Publication 100-08, Chapter 13 to the IOM Reference section and to remove the reference and language from the body of the LCD. CMS IOM reference for the NCCI was updated consistent with CMS CR 10868. There has been no change in content to the LCD.	Other     (Changes     in response     to CMS     change     request)
01/25/2018	R8	LCD posted for notice on 12/07/2017. LCD becomes effective for dates of service on and after 01/25/2018  Please note that from the period 10/05/2017 to 10/26/2017, the Source Proposed LCD listed in the LCD Information Document Information section of this LCD was displaying in error  01/19/2017 DL35038 Draft LCD posted for comment.	<ul> <li>Aberrant         Local         Utilization</li> <li>Creation of         Uniform         LCDs With         Other MAC         Jurisdiction</li> </ul>
10/01/2017	R7	LCD revised and published on 10/05/2017 effective for dates of service on and after 10/01/2017 to reflect the Annual ICD-10-CM Code Updates. <b>The following ICD-10-CM code(s) have been added to the LCD: Group 2 Code Additions:</b> H44.2A1, H44.2A2, H44.2A3, H44.2B1, H44.2B2, H44.2B3, H44.2C1, H44.2C2, H44.2C3, H44.2D1, H44.2D2, H44.2D3, H44.2E1, H44.2E2, and H44.2E3.  At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.	• Revisions Due To ICD-10-CM Code Changes
02/27/2017	R6	LCD revised and published on 05/11/2017 effective for dates of service on and after 02/27/2017 to add the following ICD-10 diagnosis codes to the Group 1 codes as covered diagnoses for CPT code 92133: H47.011, H47.012, H47.013, H47.031, H47.032, and H47.033.	• Other (Inquiry)
10/01/2016	R5	LCD revised and published on 11/10/2016 effective for dates of service on and after 10/01/2016 to reflect the ICD-10 Annual Code Updates. The following ICD-10 code(s) have been added to the Group 2 Codes as covered diagnoses: E10.3211, E10.3212, and E10.3213.	<ul> <li>Revisions         Due To         ICD-10-CM         Code         Changes     </li> </ul>
10/01/2016	R4	LCD revised and published on 09/29/2016 effective for dates of service on and after 10/01/2016 to reflect the ICD-10 Annual Code Updates. The following ICD-10 code(s) have been deleted and therefore removed	• Revisions Due To

REVISION HISTORY	HISTORY	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
DATE	NUMBER		
		from the LCD: Group 1 codes H40.11X0, H40.11X1, H40.11X2,	ICD-10-CM
		H40.11X3, and H40.11X4; Group 2 codes E08.321, E08.329, E08.331,	Code
		E08.339, E08.341, E08.349, E08.351, E08.359, E10.321, E10.329,	Changes
		E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E11.321,	
		E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359,	
		E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351,	
		E13.359, H34.811, H34.812, H34.813, H34.819, H34.831, H34.832,	
		H34.833, H34.839, H35.31, H35.32, H40.11X1, H40.11X2, H40.11X3,	
		and H40.11X4. The following ICD-10 code(s) have been added to the	
		LCD: Group 1 codes H40.1110, H40.1111, H40.1112, H40.1113,	
		H40.1114, H40.1120, H40.1121, H40.1122, H40.1123, H40.1124,	
		H40.1130, H40.1131, H40.1132, H40.1133, and H40.1134; Group 2	
		codes E08.3211, E08.3212, E08.3213, E08.3291, E08.3292, E08.3293,	
		E08.3311, E08.3312, E08.3313, E08.3391, E08.3392, E08.3393,	
		E08.3411, E08.3412, E08.3413, E08.3491, E08.3492, E08.3493,	
		E08.3511, E08.3512, E08.3513, E08.3521, E08.3522, E08.3523,	
		E08.3531, E08.3532, E08.3533, E08.3541, E08.3542, E08.3543,	
		E08.3551, E08.3552, E08.3553, E08.3591, E08.3592, E08.3593,	
		E10.3291, E10.3292, E10.3293, E10.3311, E10.3312, E10.3313,	
		E10.3391, E10.3392, E10.3393, E10.3411, E10.3412, E10.3413,	
		E10.3491, E10.3492, E10.3493, E10.3511, E10.3512, E10.3513,	
		E10.3521, E10.3522, E10.3523, E10.3531, E10.3532, E10.3533,	
		E10.3541, E10.3542, E10.3543, E10.3551, E10.3552, E10.3553,	
		E10.3591, E10.3592, E10.3593, E11.3211, E11.3212, E11.3213,	
		E11.3291, E11.3292, E11.3293, E11.3311, E11.3312, E11.3313,	
		E11.3391, E11.3392, E11.3393, E11.3411, E11.3412, E11.3413,	
		E11.3491, E11.3492, E11.3493, E11.3511, E11.3512, E11.3513,	
		E11.3521, E11.3522, E11.3523, E11.3531, E11.3532, E11.3533,	
		E11.3541, E11.3542, E11.3543, E11.3551, E11.3552, E11.3553,	
		E11.3591, E11.3592, E11.3593, E13.3211, E13.3212, E13.3213,	
		E13.3291, E13.3292, E13.3293, E13.3311, E13.3312, E13.3313,	
		E13.3391, E13.3392, E13.3393, E13.3411, E13.3412, E13.3413,	
		E13.3491, E13.3492, E13.3493, E13.3511, E13.3512, E13.3513,	
		E13.3521, E13.3522, E13.3523, E13.3531, E13.3532, E13.3533,	
		E13.3541, E13.3542, E13.3543, E13.3551, E13.3552, E13.3553,	
		E13.3591, E13.3592, E13.3593, H34.8110, H34.8111, H34.8112,	
		H34.8120, H34.8121, H34.8122, H34.8130, H34.8131, H34.8132,	
		H34.8190, H34.8191, H34.8192, H34.8310, H34.8311, H34.8312,	
		H34.8320, H34.8321, H34.8322, H34.8330, H34.8331, H34.8332,	
		H34.8390, H34.8391, H34.8392, H35.3110, H35.3111, H35.3112,	
		H35.3113, H35.3114, H35.3120, H35.3121, H35.3122, H35.3123,	
		H35.3124, H35.3130, H35.3131, H35.3132, H35.3133, H35.3134,	
		H35.3210, H35.3211, H35.3212, H35.3213, H35.3220, H35.3221,	

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		H35.3222, H35.3223, H35.3230, H35.3231, H35.3232, H35.3233, H40.1111, H40.1112, H40.1113, H40.1114, H40.1121, H40.1122, H40.1123, H40.1124, H40.1131, H40.1132, H40.1133, and H40.1134.	
10/01/2015	R3	LCD revised and published on 02/11/2016 effective for dates of service 10/01/2015 or after to add H40.11X1 to Group 2.	• Other (Inquiry )
10/01/2015	R2	LCD revised and published on 10/29/2015 effective for dates of service on and after 10/01/2015 to add multiple ICD-10 codes to all three diagnosis groups to allow for higher specificity.	Other     (Inquiries)
10/01/2015	R1	LCD revised and published on 10/08/2015 to add the following ICD-10 codes to group 2: E10.321; E10.329; E10.331; E10.339; E10.341; E10.349; E10.351; E10.359 effective for dates of service on and after 10/01/2015.	Other    (Inquiry)

# **Associated Documents**

## **Attachments**

N/A

## **Related Local Coverage Documents**

## **Articles**

A57600 - Billing and Coding: Scanning Computerized Ophthalmic Diagnostic Imaging

A55570 - Response to Comments: Scanning Computerized Ophthalmic Diagnostic Imaging

## **LCDs**

DL35038 - (MCD Archive Site)

## **Related National Coverage Documents**

N/A

#### **Public Versions**

UPDATED ON	EFFECTIVE DATES	STATUS	
12/10/2021	10/31/2019 - N/A	Currently in Effect (This Version)	
10/25/2019	10/31/2019 - N/A	0/31/2019 - N/A Superseded	
Some older versions have been archived. Please visit the MCD Archive Site to retrieve them.			

# **Keywords**

N/A