

Policy Name	Clinical Policy – Retinal Angiography
Policy Number	1313.00
Department	Clinical Product & Development
Subcategory	Medical Management
Original Approval Date	02/06/2018
Current MPC/CCO Approval Date	01/08/2025
Current Effective Date	05/01/2025

Company Entities Supported (Select All that Apply) <input checked="" type="checkbox"/> Superior Vision Benefit Management <input checked="" type="checkbox"/> Superior Vision Services <input checked="" type="checkbox"/> Superior Vision of New Jersey, Inc. <input checked="" type="checkbox"/> Block Vision of Texas, Inc. d/b/a Superior Vision of Texas <input checked="" type="checkbox"/> Davis Vision (Collectively referred to as 'Versant Health' or 'the Company')

ACRONYMS	
CNV	Choroidal Neovascularization
FA	Fluorescein Angiography
ICG	Indocyanine – Green Angiography

PURPOSE

To provide the medical necessity criteria to support the indication(s) for retinal angiography and to render medical necessity determinations. Applicable procedure codes are also defined.

POLICY

A. BACKGROUND

Retinal angiography includes both fluorescein angiography (FA) and indocyanine-green (ICG) angiography imaging. These images include the retina, choroid, optic disc, fovea, and the macula. Retinal angiographs are not medically necessary either for screening, to simply document the existence of a condition, or as a duplicative or redundant test that does not provide added information.

B. Medically Necessary

Medical necessity for any diagnostic testing, including FA and ICG, begins with pertinent signs, symptoms, or medical history of a condition for which the examining physician needs further information. FA and/or ICG is ordered and performed when the information garnered from the eye exam is insufficient to assess the patient's disease and is medically necessary as an adjunct to evaluation and management of a known disease.

1. Fluorescein Angiography (FA)

FA is considered medically necessary as an adjunct to evaluation and management of chorioretinal vascular abnormalities, including the following:

- a. Choroidal neovascularization (CNV),
 - b. Noninfective vasculitis,
 - c. Age-related macular degeneration,
 - d. Macular edema,
 - e. Intraocular tumors,
 - f. Visual loss in systemic disease or acute exudative inflammations, Such as toxoplasmosis, optic disc edema, or central serous chorioretinopathy,
 - g. Genetic ocular conditions requiring FA to confirm diagnoses, i.e.
 - i. FEVR (familial exudative vitreoretinopathy);¹
 - ii. Coats disease (often coded as "exudative retinopathy", same as FEVR);²
 - iii. Norrie disease;³
 - iv. Incontinentia Pigmenti;⁴
 - v. Dyskeratosis Congenita;⁵
 - vi. Sickle Cell Retinopathy;⁶
2. Repeat FA may be medically necessary when there is a change in the clinical picture.
3. Repeat FA may also be medically necessary following treatment to detect occult lesions, with or without a clinical change. This will occur most often in CNV and very rarely in other diseases. Otherwise, repeated angiography of the same, unchanged condition is unwarranted.
4. Indocyanine Green (ICG) may be valuable as an adjunct to FA in:
- a. Retinal neovascularization
 - b. Choroidal neovascularization
 - c. Serous detachment of retinal pigment epithelium
 - d. Hemorrhagic detachment of retinal pigment epithelium
 - e. Retinal hemorrhage

¹ Sizmaz, 2015.

² Sigler, 2014

³ Scruggs, 1999.

⁴ Tzu, 2013.

⁵ Mason, 2009.

⁶ Pahl, 2017.

C. Not Medically Necessary

1. Retinal angiography, FA or ICG, is not medically necessary in the following situations:
 - a. When used in an eye without signs, symptoms, serious ophthalmic disease, ocular abnormalities, or contributory medical history,
 - b. When used to confirm a diagnosis that has already been determined,
 - c. Without a documented medical rationale in the medical record.
2. When the angiographic images are taken as baseline documentation of a healthy eye or as screening for potential disease.

D. Documentation

Medical necessity must be supported by adequate and complete documentation in the patient’s medical record that describes the procedure and the medical rationale for it as in the requirements above. All medical record items must be available upon request to initiate or sustain previous payments. For any retrospective review, a full operative report is needed.

Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, date(s) of service). Services provided/ordered must be authenticated by the physician, in a handwritten or electronic signature. Stamped signatures are not acceptable.

1. Fluorescein angiography (FA) and Indocyanine-green angiography (ICG), separately or together, require a physician’s order, and the interpretation and report for the date performed.
2. Only reliable tests are relevant for medical necessity. Reliability is measured with interpretation and report of the following:
 - a. Patient cooperation
 - b. Test findings with interpretation and report. Do not submit normal test results.
 - c. Comparison, when applicable, to any previously completed FA and/or ICG test results.
 - d. Assessment, diagnosis
 - e. Decision impact on treatment, prognosis
 - f. The medical record must contain copies of photographs or digital images and be available upon request.

E. Procedural Detail

CPT CODES	
92235	Fluorescein angiography (includes multiframe imaging) with interpretation and report, unilateral or bilateral
92240	Indocyanine-green angiography (includes multiframe imaging) with interpretation and report, unilateral or bilateral

92242	Fluorescein angiography and indocyanine-green angiography (includes multiframe imaging) performed at the same patient encounter with interpretation and report, unilateral or bilateral
Invalid Modifiers	RT, LT, 50

DISCLAIMER and COPYRIGHTS

This policy is provided for information purposes only and does not constitute medical advice. Versant Health, Inc., and its affiliates (the “Company”) do not provide health care services and cannot guarantee any results or outcomes. Treating doctors are solely responsible for determining what services or treatments to provide to their patients. Patients (members) should always consult their doctor before making any decisions about medical care.

Subject to applicable law, compliance with this clinical policy is not a guarantee of coverage or payment. Coverage is based on the terms of an individual’s particular benefit plan document, which may not cover the service(s) or procedure(s) addressed in this clinical policy. The terms of the individual’s specific benefit plan are always determinative.

Every effort has been made to ensure that the information in this clinical policy is accurate and complete, however the Company does not guarantee that there are no errors in this policy or that the display of this file on a website is without error. The company and its employees are not liable for any errors, omissions, or other inaccuracies in the information, product, or processes disclosed herein.

Neither the company nor the employees represent that the use of such information, products, or processes will not infringe on privately owned rights. In no event shall the Company be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of such information, product, or process.

COMPANY’S COPYRIGHT STATEMENT Except for any copyrights described below, this clinical policy is confidential and proprietary, and no part of this clinical policy may be copied, distributed, or used without Versant Health, or its applicable affiliates’ express prior written approval.

AMA COPYRIGHT STATEMENT CPT© is the 2002-2025 copyright of the American Medical Association. All Rights Reserved. CPT™ is a registered trademark of the American Medical Association. Applicable FARS/DFARS Apply to Government Use. 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.

RELATED POLICIES AND PROCEDURES
--

n/a

DOCUMENT HISTORY		
<i>Approval Date</i>	<i>Revision</i>	<i>Effective Date</i>
02/06/2018	Initial version	02/06/2018
03/13/2019	Annual review with code additions	03/13/2019
02/19/2020	Annual review; no criteria changes.	04/01/2020
01/06/2021	Annual review; remove statement requiring direct office supervision.	04/01/2021
01/05/2022	Annual review; no criteria changes.	04/01/2022
01/04/2023	Annual review; no criteria changes	04/01/2023
09/20/2023	Administrative review for CMS 2024 final rule Medicare Part C equity: no changes.	n/a
01/03/2024	Annual review. Add indications of macular edema, need to identify ischemia, neo-vascularization, need to locate microaneurysms, and central serous chorioretinopathy.	04/01/2024
01/08/2025	Annual review. Add genetic conditions requiring FA to confirm diagnosis.	05/01/2025

REFERENCES AND SOURCES

1. Baillif S, Wolff B, Paoli V, et.al. Retinal fluorescein and indocyanine green angiography and spectral-domain optical coherence tomography findings in acute retinal pigment epitheliitis. *Retina*. 2011 Jun;31(6):1156-63. doi: 10.1097/IAE.0b013e3181fbcea5. PMID: 21293312.
2. Balaratnasingam C, Yannuzzi LA, Franchina M, et.al. Idiopathic Retinal Vasculitis, Aneurysms, and Neuroretinitis (IRVAN) in a Patient Without IRVAN History. *JAMA Ophthalmol*. 2019 Feb 1;137(2):230-232. doi: 10.1001/jamaophthalmol.2018.5247. PMID: 30419083.
3. Berger L, Bühler V, Yzer S. Central Serous Chorioretinopathy - an Overview. *Klin Monbl Augenheilkd*. 2021 Sep;238(9):971-979. English, German. doi: 10.1055/a-1531-5605. Epub 2021 Aug 20. PMID: 34416788.
4. Berkowitz ST, Lam S, Sternberg P Jr, et.al. Time-driven Activity-based Costing Analysis of Fluorescein Angiography. *Ophthalmol Retina*. 2023 Sep;7(9):804-810. doi: 10.1016/j.oret.2023.05.016. Epub 2023 May 25. PMID: 37244412.
5. Chee RI, Gupta MP, Valikodath NG, et.al. Evaluation of Potential Systemic Adverse Events Related to Fluorescein Angiography in Pediatric Patients. *Ophthalmol Retina*. 2020 Jun;4(6):595-601. doi: 10.1016/j.oret.2019.12.012. Epub 2019 Dec 16. PMID: 32146220; PMCID: PMC7880605.
6. Dhami A, Malhi RK, Dhami NB, et.al. Acute retinal pigment epithelitis: optical coherence tomography-based diagnostic approach. *Indian J Ophthalmol*. 2020 May;68(5):913-914. doi: 10.4103/ijo.IJO_1350_19. PMID: 32317484; PMCID: PMC7350456.
7. Karasu B, Özkan D, Erdoğan G, et.al. The fluorescein angiographic photo diagnosis of idiopathic retinal vasculitis, aneurysms, and neuroretinitis (IRVAN) syndrome: Outcome of combined therapy. *Photodiagnosis Photodyn Ther*. 2019 Sep; 27:336-339. doi: 10.1016/j.pdpdt.2019.06.013. Epub 2019 Jun 28. PMID: 31260747.
8. Konidaris VE, Empeslidis T. Ranibizumab in choroidal neovascularization associated with

- ocular sarcoidosis. *BMJ Case Rep.* 2013 Nov 14;2013:bcr2013010288. doi: 10.1136/bcr-2013-010288. PMID: 24234427; PMCID: PMC3830385.
9. Liscombe-Sepúlveda JP, Alba-Linero C, Llorenç-Belles V, et.al. Utility of Ultra-Widefield Retinal Imaging in the Follow-up and Management of Patients with Cytomegalovirus Retinitis. *Ocul Immunol Inflamm.* 2020 May 18;28(4):659-664. doi: 10.1080/09273948.2019.1606257. Epub 2019 Jul 3. PMID: 31268742.
 10. Liu XC, Zhang MN, Chen B, et.al. A new perspective for analyzing clinical characteristics of idiopathic retinal vasculitis, aneurysms, and neuroretinitis syndrome. *Int Ophthalmol.* 2019 Jul;39(7):1475-1482. doi: 10.1007/s10792-018-0962-7. Epub 2018 Jun 22. PMID: 29934930.
 11. Liu XC, Zhang MN, Chen B, et.al. A new perspective for analyzing clinical characteristics of idiopathic retinal vasculitis, aneurysms, and neuroretinitis syndrome. *Int Ophthalmol.* 2019 Jul;39(7):1475-1482. doi: 10.1007/s10792-018-0962-7. Epub 2018 Jun 22. PMID: 29934930.
 12. Mason JO 3rd, Yunker JJ, Nixon PA, et al. Proliferative retinopathy as a complication of dyskeratosis congenita. *Retin Cases Brief Rep.* 2009;3(3):259-262. doi: 10.1097/01.ICB.0000315662.87050.bf
 13. Moosavi A, Figueiredo N, Prasanna P, et.al. Imaging Features of Vessels and Leakage Patterns Predict Extended Interval Aflibercept Dosing Using Ultra-Widefield Angiography in Retinal Vascular Disease: Findings from the PERMEATE Study. *IEEE Trans Biomed Eng.* 2021 Jun;68(6):1777-1786. doi: 10.1109/TBME.2020.3018464. Epub 2021 May 21. PMID: 32822291; PMCID: PMC8128650.
 14. Pahl DA, Green NS, Bhatia M, et al. Optical Coherence Tomography Angiography and Ultra-widefield Fluorescein Angiography for Early Detection of Adolescent Sickle Retinopathy. *Am J Ophthalmol.* 2017;183:91-98. doi:10.1016/j.ajo.2017.08.010
 15. Pichi F, Sarraf D, Arepalli S, et.al. The application of optical coherence tomography angiography in uveitis and inflammatory eye diseases. *Prog Retin Eye Res.* 2017 Jul; 59:178-201. doi: 10.1016/j.preteyeres.2017.04.005. Epub 2017 Apr 29. PMID: 28465249.
 16. Reichel C, Berlin A, Radun V, et.al. Quantitative Fundus Autofluorescence in Systemic Chloroquine/Hydroxychloroquine Therapy. *Transl Vis Sci Technol.* 2020 Aug 28;9(9):42. doi: 10.1167/tvst.9.9.42. PMID: 32934892; PMCID: PMC7463177.
 17. Rishi P, Raka N, Rishi E. Analysis of Potential Ischemic Effect of Intravitreal Bevacizumab on Unaffected Retina in Treatment-Naïve Macular Edema Due to Branch Retinal Vein Occlusion: A Prospective, Interventional Case-Series. *PLoS One.* 2016 Sep 12;11(9): e0162533. doi: 10.1371/journal.pone.0162533. PMID: 27618696; PMCID: PMC5019367.
 18. Risseuw S, de Boer JH, Ten Dam-van Loon NH, et.al. Risk of Rhegmatogenous Retinal Detachment in Acute Retinal Necrosis with and without Prophylactic Intervention. *Am J Ophthalmol.* 2019 Oct; 206:140-148. doi: 10.1016/j.ajo.2019.05.023. Epub 2019 Jun 3. PMID: 31170391.
 19. Sanjay S, Gadde SGK, Agrawal S, et.al. Optical coherence tomography angiography (OCTA) of retinal vasculature in patients with post fever retinitis: a qualitative and quantitative analysis. *Sci Rep.* 2021 Sep 3;11(1):17647. doi: 10.1038/s41598-021-96715-8. PMID: 34480039; PMCID: PMC8417288.
 20. Schranz M, Bogunovic H, Deak G, et.al. Linking disease activity with optical coherence tomography angiography in neovascular age related macular degeneration using artificial intelligence. *Sci Rep.* 2024 Aug 20;14(1):19278. doi: 10.1038/s41598-024-70234-8. PMID: 39164449.
 21. Scruggs BA, Reding MQ, Schimmenti LA. NDP-Related Retinopathies. In: Adam MP, Feldman J, Mirzaa GM, Pagon RA, Wallace SE, Amemiya A, eds. *GeneReviews®*. Seattle (WA): University of Washington, Seattle; July 30, 1999.
 22. Shanmugam M, Konana VK, Ramanjulu R, et.al. Optical coherence tomography angiography features of retinitis post-rickettsial fever. *Indian J Ophthalmol.* 2019 Feb;67(2):297-300. doi:

- 10.4103/ijo.IJO_799_18. PMID: 30672502; PMCID: PMC6376812.
23. Sızmaz S, Yonekawa Y, T Trese M. Familial Exudative Vitreoretinopathy. *Turk J Ophthalmol.* 2015;45(4):164-168. doi:10.4274/tjo.67699.
 24. Spaide, RF., Klancnik, JM., Cooney, MJ. Retinal Vascular Layers Imaged by Fluorescein Angiography and Optical Coherence Tomography Angiography. *JAMA Ophthalmology*, 2015, 133(1), 45–50; 2015.
 25. Sigler EJ, Randolph JC, Calzada JI, Wilson MW, Haik BG. Current management of Coats disease. *Surv Ophthalmol.* 2014;59(1):30-46. doi: 10.1016/j.survophthal.2013.03.007.
 26. Sundar MD, Dewan L, Chawla R, et.al. Three-years follow-up swept source optical coherence tomography angiography findings in post-fever retinitis. *Indian J Ophthalmol.* 2020 Sep;68(9):2024-2028. doi: 10.4103/ijo.IJO_2031_19. PMID: 32823467; PMCID: PMC7690496.
 27. Teo KY, Invernizzi A, Staurenghi G, et.al. COVID-19-Related Retinal Micro-vasculopathy - A Review of Current Evidence. *Am J Ophthalmol.* 2022 Mar; 235:98-110. doi: 10.1016/j.ajo.2021.09.019. Epub 2021 Sep 26. PMID: 34587494; PMCID: PMC8465265.
 28. Tripathy K. Pathogenesis of idiopathic retinal vasculitis, aneurysms, and neuroretinitis (IRVAN) or 'idiopathic retinal arteriolar aneurysms (IRAA)' with macular star. *Med Hypotheses.* 2018 Mar; 112:65-66. doi: 10.1016/j.mehy.2018.01.016. PMID: 29447942.
 29. Tzu JH, Murdock J, Parke DW 3rd, Warman R, Hess DJ, Berrocal AM. Use of fluorescein angiography in incontinentia pigmenti: a case report. *Ophthalmic Surg Lasers Imaging Retina.* 2013;44(1):91-93. doi:10.3928/23258160-20121221-20
 30. Vezzola D, Allegrini D, Borgia A, et.al. Swept-source optical coherence tomography and optical coherence tomography angiography in acquired toxoplasmic chorioretinitis: a case report. *J Med Case Rep.* 2018 Dec 4;12(1):358. doi: 10.1186/s13256-018-1902-x. PMID: 30509327; PMCID: PMC6278094.
 31. Wongchaisuwat N, Khongpipatchaisiri S, Boonsoon S, et.al. Extralesional microvascular and structural macular abnormalities in cytomegalovirus retinitis. *Sci Rep.* 2020 Dec 8;10(1):21432. doi: 10.1038/s41598-020-78587-6. PMID: 33293646; PMCID: PMC7722750.
 32. Yannuzzi LA, Rohrer KT, Tindel LJ, et al. Fluorescein angiography complication survey. *Ophthalmology.* 1986; 93(5):611-617.
 33. Zhang P, Wang C, Liang Y, et.al. Retinal and choroidal microvascular features during pregnancy: a systematic review and meta-analysis. *BMJ Open.* 2024 Aug 17;14(8): e087319. doi: 10.1136/bmjopen-2024-087319. PMID: 39153771; PMCID: PMC11331858.

SOURCES

1. American Academy of Ophthalmology®. Age-Related Macular Degeneration Preferred Practice Patterns.2019. <https://www.aao.org/education/preferred-practice-pattern/age-related-macular-degeneration-ppp>. Accessed 8/2024.
2. American Academy of Ophthalmology®, Retina Summary Benchmarks Preferred Practice Patterns, 2023. <https://www.aao.org/education/summary-benchmark-detail/retina-summary-benchmarks-2020>. Accessed 8/2024.
3. Bennett, T. The Fundamentals of Fluorescein Angiography. The Ophthalmic Photographers' Society, Inc. <http://eye-pix.com/wp-content/uploads/Bennett-ASORN-2016.pdf>. Accessed 8/2024.
4. EyeWiki, American Academy of Ophthalmology®. Fluorescein Angiography. 2024.. https://eyewiki.aao.org/Fluorescein_Angiography. Accessed 8/2024.
5. NIH National Library of Medicine; Indocyanine-green Angiography 2023. <https://www.ncbi.nlm.nih.gov/books/NBK580479/>. Accessed 8/2024.