

Molina Clinical Policy

Susvimo (ranibizumab) Intravitreal Implant

Policy No. 411

Last Approval: 2/8/2023

Next Review Due By: February 2024



DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

Age-related macular degeneration (AMD) is a degenerative disease of the central portion of the retina (the macula) that causes loss of central vision, which is required for activities such as driving, reading, watching television, and performing daily tasks. There are 2 clinical subtypes of AMD: non-neovascular (also called dry or atrophic), which represents the majority of cases, and neovascular AMD (nAMD), also called wet or exudative (Flaxel 2020). Although the neovascular or wet AMD subtype accounts for a minority of cases (approximately 10% to 15%), it is responsible for the bulk of the severe vision loss from AMD. nAMD is characterized by the formation of abnormal blood vessels (or choroidal neovascularization) beneath the retina and macula, causing the macula to protrude or rise from its natural flat position and distorting or destroying central vision. Under these circumstances, vision loss may be rapid and severe. Effective therapies for exudative or wet AMD include intravitreal injection of a vascular endothelial growth factor (VEGF) inhibitor, photodynamic therapy (PDT), and supplementation with zinc and antioxidant vitamins. Intravitreal injection therapy using anti-VEGF agents (e.g., aflibercept, bevacizumab, and ranibizumab) is the most effective way to manage nAMD and represents the first line of treatment. (AAO 2019).

Susvimo (previously referred to as the Port Delivery System with ranibizumab) is a refillable, permanent eye implant that continuously releases a customized formulation of ranibizumab to the eye. The Port Delivery System (PDS), a permanent refillable implant roughly the size of a grain of rice, is surgically implanted into the eye during a one-time outpatient procedure and continuously delivers a customized formulation of ranibizumab over a period of time. The implant is refilled every 6 months. Susvimo has a concentration of 100 mg/mL, while Lucentis has a concentration of either 6 mg/mL or 10 mg/mL. FDA approval of Susvimo (ranibizumab intravitreal injection implant) is based on the results of the Phase III ARCHWAY trial in patients with nAMD, which demonstrated nAMD patients treated with Susvimo achieved vision gains equivalent to monthly ranibizumab injections through 40 weeks of treatment.

Neovascular (wet) AMD. The efficacy of Susvimo was evaluated in a pivotal trial, Archway, comprising patients with nAMD who had previously responded to VEGF inhibitor injections. Patients received at least three anti-VEGF intravitreal injections within six months before to screening and exhibited an anatomic and visual response to anti-VEGF treatment for nAMD. Susvimo was noninferior to Lucentis (ranibizumab intravitreal injection) in terms of the change in BCVA from baseline, the primary efficacy outcome (+0.2 letters vs. +0.5 letters, respectively).

Regulatory Status

Susvimo (ranibizumab injection) 100 mg/mL was approved by the FDA in October 2021 for intravitreal use via ocular implant treatment of patients with neovascular (wet) AMD who have previously responded to at least two intravitreal injections of a VEGF inhibitor. The initial fill and ocular implant insertion procedures, as well as implant removal procedures (if medically necessary), must be performed in an operating room using aseptic technique by a physician experienced in vitreoretinal surgery. The refill exchange procedures are done every 24 weeks (6 months) and must be done by a physician experienced in ophthalmic surgery. Supplemental treatment with Lucentis 0.5 mg injections may be required in a small percentage of patients (about 5%) while the Susvimo implant is in place. Susvimo carries a boxed warning for endophthalmitis because the implant has been linked to a threefold increase of endophthalmitis compared to monthly intravitreal injections of ranibizumab.

COVERAGE POLICY

Susvimo (ranibizumab intravitreal injection implant) for the treatment of patients with nAMD **may be considered medical necessary** when **ALL** of the following clinical criteria are met:

1. Diagnosis of neovascular (wet) AMD; **AND**
2. Member has previously responded to at least **TWO** intravitreal injections of a VEGF inhibitor medication (e.g., aflibercept, pegaptanib, brolucizumab, bevacizumab, ranibizumab, faricimab-svoa, etc.)

Molina Reviewer: Verify claims data for medications. For new members to Molina Healthcare, confirm medications use in medical or chart notes.

Informational Note: In the pivotal trial, Susvimo demonstrated non-inferiority compared with Lucentis (Prescribing Information; Holekamp 2021). However, ocular adverse events were more frequent with Susvimo vs. Lucentis; patients treated with Susvimo require regular monitoring to evaluate for presence of these adverse events. Notably, Susvimo labeling includes a Boxed Warning regarding endophthalmitis, which reported a 3-fold higher rate with Susvimo than with monthly intravitreal injections of ranibizumab (Lucentis).

AND

3. Documentation of baseline best corrected visual acuity (BCVA) with notation of eye(s) being treated; **AND**
4. Susvimo (ranibizumab) is prescribed as monotherapy. Member is not on other ophthalmic anti-VEGF medications [i.e., bevacizumab (Avastin), pegaptanib (Macugen), and aflibercept (Eylea), brolucizumab (Beovu), ranibizumab (Lucentis)] **unless** *supplemental treatment is necessary (refer to Exception criteria below).

Informational Note: In a minority of patients (about 5%), supplemental treatment with Lucentis 0.5 mg injections may be necessary while the Susvimo implant is in place.

AND

5. **EXCEPTION to #4:** Supplemental treatment with intravitreal ranibizumab injection (Lucentis)

Lucentis as periodic rescue therapy for breakthrough symptoms in patients receiving treatment with Susvimo is considered with the following documentation:

- a. Member has had an insufficient response during initial or maintenance therapy with Susvimo administered every 24 weeks and requires supplemental treatment with intravitreal ranibizumab. Clinical documentation required.

AND

- b. Supplemental treatment with Lucentis 0.5 mg intravitreal ranibizumab injection may be administered in the affected eye while the Susvimo implant is in place if **ONE** of the following are met:
 - A decrease in visual acuity by half from the baseline visual acuity (15 ETDRS letters are equivalent to a decrease in visual acuity by half); **OR**
 - Increase of 150 μ m or more in retinal thickness measured by central subfield thickness (CST) on spectral domain OCT (SD-OCT) from the lowest CST measurement; **OR**
 - Increase of \geq 100 μ m on SD-OCT from lowest measurement and decrease of \geq 10 letters from best recorded BCVA.

Informational Note: Susvimo was not studied with supplemental doses of other anti-VEGF therapies and therefore, should not be administered with any other intravitreal injections other than Lucentis. Supplemental doses were given when the study participants experienced one of the above conditions (Holekamp 2021; Archway Phase 3)

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AND

6. Documentation of ALL the following:

- a. Prescriber attests, or the clinical reviewer has found, that the member does not have any known *FDA-labeled contraindication(s) that has/have not been addressed by the Prescriber within the documentation submitted for review. *Contraindications to ranibizumab include ocular or periocular infections, known hypersensitivity to ranibizumab or any of the excipients (i.e., Member has required removal of a Susvimo implant in the past); **AND**
- b. Member is free of ocular and/or peri-ocular infections.

CONTINUATION OF THERAPY

1. Reauthorization request is for the same eye as initial authorization

NOTE: The continuation of therapy criteria is only for the same previously treated eye. If member has developed condition in an untreated eye, Prescriber must submit new request with Initial Coverage criteria.

AND

2. Member continues to meet initial coverage criteria AND continued need for treatment has been formally assessed and submitted for review; **AND**
3. Positive response to treatment as confirmed by baseline evaluations or documentation as submitted by Prescriber (e.g., improvement in the baseline BCVA, etc.); **AND**
4. No evidence of unacceptable adverse events, complications, or toxicity to implant [e.g., endophthalmitis, rhegmatogenous retinal detachment, implant dislocation, vitreous hemorrhage, conjunctival erosion, conjunctival retraction, conjunctival blebs, septum dislodgement, etc.];
5. For Supplemental treatment ONLY: Member has had an insufficient response during initial or maintenance therapy with Susvimo administered every 24 weeks and requires supplemental treatment with intravitreal ranibizumab.

LIMITATIONS AND EXCLUSIONS

The following are considered **contraindications/exclusions/discontinuations** based on insufficient evidence:

1. Known hypersensitivity to ranibizumab products (e.g., Lucentis, Byooviz, Cimerli, etc.) or any of the excipients in Susvimo
2. Active ocular or periocular infections
3. Active intraocular inflammation.

The following are considered **experimental, investigational, and unproven** based on insufficient evidence:

1. Any indications other than those listed above

DURATION OF APPROVAL: 6 months

PRESCRIBER REQUIREMENTS: Prescribed by, or in consultation with, a board-certified ophthalmologist, ophthalmic surgeon, or retinal specialist. If prescribed in consultation, consultation notes must be submitted within initial request and reauthorization requests. The implant initial fill procedure must be performed by a physician experienced in vitreoretinal surgery.

AGE RESTRICTIONS: 18 years of age and older
Safety and efficacy have not been established in pediatric patients.

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DOSING CONSIDERATIONS

Initial/Maintenance: 2 mg per 6 months [2 mg (0.02 mL of 100 mg/mL solution) continuously delivered via the Susvimo ocular implant with refills administered every 24 weeks (approximately 6 months)].

Supplemental Treatment with intravitreal ranibizumab injection: Treatment with 0.5 mg (0.05 mL of 10 mg/mL) intravitreal ranibizumab injection may be administered in the affected eye while the Susvimo implant is in place and if clinically necessary.

QUANTITY LIMITATIONS: Susvimo 100 mg/mL solution for injection SDV: 1 vial per eye every 24 weeks

Maximum units: Neovascular AMD: 4 mg every 24 weeks (based on administration to both eyes)

ADMINISTRATION

1. For intravitreal use only.
2. The initial fill and ocular implant insertion and implant removal procedures must be performed under aseptic conditions by a physician experienced in vitreoretinal surgery.
3. Susvimo ocular implant insertion and removal is a surgical procedure that is performed in an operating room. No more than 30 minutes should pass between the initial fill of the ocular implant and the insertion into the patient's eye. The procedure must be performed under aseptic conditions by a physician experienced in vitreoretinal surgery.
5. If member meets all criteria and approval for therapy is granted, medication will be dispensed by a specialty pharmacy vendor at the discretion of Molina Healthcare.
6. Refer to Specialty Medication Administration Site of Care Policy: MHI Pharm 11.

BOXED WARNING

Endophthalmitis. The implant has been associated with a 3-fold higher rate of endophthalmitis than monthly intravitreal injections of ranibizumab. Many of these events were associated with conjunctival retractions or erosions. Appropriate conjunctiva management and early detection with surgical repair of conjunctival retractions or erosion may reduce the risk of endophthalmitis. In clinical trials, 2% of patients receiving an implant experienced at least one episode of endophthalmitis (Product Labeling, 2022).

DOCUMENTATION REQUIREMENTS. Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive.

SUMMARY OF MEDICAL EVIDENCE

The best available evidence evaluating Susvimo in patients with nAMD is a published report on the pivotal phase 3 ARCHWAY study (Holekamp et al. 2021; FDA PI 2021).

Holekamp et al. (2021) evaluated the clinical efficacy and safety of the Susvimo eye implant in a randomized, multicenter, open-label Phase 3 study in patients with neovascular AMD. The study assessed Susvimo 100 mg/mL for intravitreal use administered via the Susvimo eye implant refilled every 6 months at fixed intervals, compared to monthly intravitreal injections of ranibizumab 0.5 mg in 415 patients with neovascular or "wet" AMD. It measured BCVA following 36–40 weeks of treatment. Per pre-specified study criteria, Susvimo was found to be non-inferior to monthly injections; patients who were given monthly injections gained 0.5 letters on average, while those who received injections via Susvimo gained 0.2 letters. The Archway study demonstrated that patients receiving a ranibizumab implant had visual acuity gains equivalent to patients receiving monthly ranibizumab injections and that approximately 98% could receive continuous treatment for 6 months before requiring a refill or supplemental ranibizumab.

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This study included 415 participants (n = 248 in the Susvimo arm; n = 167 in the intravitreal ranibizumab arm) were treated in this study. Patients were diagnosed with nAMD within the 9 months prior to screening and received at least 3 anti-VEGF intravitreal agents in the study eye within the 6 months prior to screening. Each patient was required to have demonstrated a response to an anti-VEGF intravitreal agent prior to randomization. Patients were randomized to receive continuous delivery of Susvimo via the Susvimo implant every 24 weeks or 0.5 mg intravitreal ranibizumab injections every 4 weeks. The primary endpoint of the study was the change in BCVA score from baseline at the average of weeks 36 and 40. Secondary endpoints include safety, overall change in vision (BCVA) from baseline, and change from baseline in center point thickness over time. The primary efficacy endpoint of change from baseline in distance BCVA score averaged over Week 36 and Week 40 demonstrated that Susvimo was equivalent to intravitreal ranibizumab injections administered every 4 weeks. Susvimo was generally well-tolerated, with a favorable benefit-risk profile. Although well-tolerated with a favorable benefit-risk profile, the ranibizumab PDS implant has been associated with a threefold higher rate of endophthalmitis than monthly injections of ranibizumab. Further adverse events found in the Archway trial included conjunctival hemorrhage, conjunctival hyperemia, iritis, and eye pain. (ARCHWAY Study; [NCT03677934](https://clinicaltrials.gov/ct2/show/study/NCT03677934)).

National and Specialty Organizations

The **American Academy of Ophthalmology (AAO)** (2019) preferred practice pattern for AMD addressed intravitreal injection therapy for neovascular AMD, noting ‘the use of intravitreal injection therapy using anti-VEGF agents (e.g., aflibercept, bevacizumab, and ranibizumab) is the most effective way to manage nAMD and represents the first line of treatment.’

SUPPLEMENTAL INFORMATION

None.

CODING & BILLING INFORMATION

CPT Code

CPT	Description
J2779	Injection, ranibizumab, via intravitreal implant (Susvimo), 0.1 mg

HCPCS Code

C9399	Unclassified drugs or biologicals (Hospital outpatient use only)
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CODING DISCLAIMER. Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

2/8/2023 Policy reviewed. Updated content. Revised verbiage and wording for clarity with no changes in intent. Updated references.
2/9/2022 New policy. IRO review 12/26/19. Practicing MD board-certified in Ophthalmology.

REFERENCES

Government Agencies

- Centers for Medicare and Medicaid Services (CMS). Medicare coverage database (search “Susvimo”, “ranibizumab injection”). No NCD Identified (as of January 2023). Available from [CMS](https://www.cms.gov/medicare-coverage-database/).
 - Billing and Coding (A53121): Information Regarding Uses, Including Off-Label Uses, of Anti-Vascular Endothelial Growth Factor

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(anti-VEGF), for The Treatment of Ophthalmological Diseases. Revision Effective Date: 07/01/2022.

- Billing and Coding (A56716): Vascular Endothelial Growth Factor Inhibitors for the Treatment of Ophthalmological Diseases. Revision Effective Date: 07/01/2022.
2. ClinicalTrials.gov. A phase iii study to evaluate the port delivery system with ranibizumab compared with monthly ranibizumab injections in participants with wet age-related macular degeneration (Archway). Accessed December 2021. Available [ClinicalTrials.gov](https://clinicaltrials.gov).

Prescribing Information and Drug Compendia

1. Susvimo (ranibizumab) [prescribing information]. South San Francisco, CA: Genentech Inc; April 2022.
2. Merative Micromedex DRUGDEX (electronic version). Merative, Ann Arbor, Michigan, USA. Available at: <https://www.micromedexsolutions.com/> (cited: January 2023).

Peer Reviewed Publications

1. Flaxel CJ, Adelman RA, Bailey ST, Fawzi A, Lim JI, Atma Vemulakonda G, Ying G-S. Age-related macular degeneration preferred practice pattern. *Ophthalmology*. 2020;127(1):P1-P65. Eerratum in *Ophthalmology*. 2020;127(9):1279. doi:10.1016/j.ophtha.2019.09.024. Epub 2019 Sep 25. Erratum in: *Ophthalmology*. 2020 Sep;127(9):1279. PMID: 31757502.
2. Holekamp N, Campochiaro P, et al. Archway randomized phase 3 trial of the port delivery system with ranibizumab for neovascular age-related macular degeneration. *Ophthalmology*. 2021.

National and Specialty Organizations

1. American Academy of Ophthalmology (AAO). Preferred practice patterns (AAO-PPP) Retina/Vitreous Panel, Hoskins Center for Quality Eye Care. Age-Related Macular Degeneration PPP. Update 2019. Oct 2019.
As of November 2021, an update has been issued to the Age-Related Macular Degeneration PPP on page 33. As of November 2021, an update has been issued to the Age-Related Macular Degeneration PPP on page 33. Available from [AAO](#).
2. Awh CC, on behalf of the Archway Investigators. Updated safety and efficacy results from the Archway Phase III trial of the port delivery system with ranibizumab (PDS) for neovascular AMD. Presented at: the American Society of Retina Specialists 39th Annual Meeting; San Antonio, TX; October 8-12, 2021. Available from [American Society of Retina Specialists](#).

Evidence Based Reviews and Publications

1. Arroyo JG. Age-related macular degeneration: Treatment and prevention. Available from [UpToDate](#). Updated November 18, 2021. Accessed January 2022. [via subscription].
2. Arroyo JG. Age-related macular degeneration: Clinical presentation, etiology, and diagnosis. Available from [UpToDate](#). Updated June 18, 2020. Accessed January 2022. [via subscription].
3. Genentech, Inc. Susvimo prescribing information. South San Francisco, CA. Available [here](#). October 2021. Accessed December 2021.
4. Genentech, Inc. Susvimo initial fill and implant procedure instructions for use. 2021.
5. Hayes. Emerging technology report: Susvimo (ranibizumab) ocular implant for neovascular age-related macular degeneration. Available from [Hayes](#). Published October 26, 2021. [via subscription].

Other Sources (not cited in policy)

1. Extension study for the port delivery system with ranibizumab (Portal). Cited December 2021. Available [here](#).
2. A phase III, multicenter, randomized, visual assessor-masked, active-comparator study of the efficacy, safety, and pharmacokinetics of the port delivery system with ranibizumab in patients with diabetic macular edema - NCT04108156 (Pagoda). Cited December 2021. Available [here](#).
3. A phase III, multicenter, randomized study of the efficacy, safety, and pharmacokinetics of the port delivery system with ranibizumab in patients with diabetic retinopathy – NCT04503551. Cited December 2021. Available [here](#).
4. A phase IIIb, global, multicenter, randomized, visual assessor-masked study of the efficacy, safety, and pharmacokinetics of a 36-week refill regimen for the port delivery system with ranibizumab in patients with neovascular age-related macular degeneration – NCT04657289 (Velodrome). Cited December 2021. Available [here](#).
5. Phase III, multicenter, randomized, visual assessor-masked, active-comparator study of the efficacy, safety, and pharmacokinetics of the port delivery system with ranibizumab in patients with neovascular age-related macular degeneration – NCT03677934. Cited December 2021. Available [here](#).

Phase II LADDER Study

6. Campochiaro PA, et al. The port delivery system with ranibizumab for neovascular age-related macular degeneration: Results from the randomized phase 2 ladder clinical trial. *Ophthalmology*. 2019 Aug;126(8):1141-1154. doi: 10.1016/j.ophtha.2019.03.036. Epub 2019 Apr 1. PMID: 30946888. (Phase II multicenter dose-ranging randomized controlled trial evaluating Susvimo in patients with nAMD).
7. Khanani AM, et al; of the Ladder Investigators. End-of-study results for the ladder phase 2 trial of the port delivery system with ranibizumab for neovascular age-related macular degeneration. *Ophthalmol Retina*. 2021 Aug;5(8):775-787. doi: 10.1016/j.oret.2020.11.004. Epub 2020 Nov 18. PMID: 33217618. (End-of-study findings through a mean time-on-study of 22 months)