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Subject: Vascular Endothelial Growth Factor Inhibitors for Ocular Neovascularization

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DESCRIPTION:

Uncorrectable vision impairment and blindness affect more than 4.2 million individuals in the United States older than the age of 40. Age-related macular degeneration (AMD), glaucoma, cataracts, and diabetic retinopathy are the most common eye disorders in the U.S. adult population. AMD is the leading cause of permanent impairment of reading and fine or close-up vision among people aged 65 years and older. Vascular endothelial growth factor (VEGF) has been implicated in the pathogenesis of a variety of ocular vascular conditions characterized by choroidal neovascularization (CNV) and macular edema. VEGF is a protein that stimulates the growth, proliferation, and survival of vascular endothelial cells. Several VEGF inhibitors for ocular use have been approved for the treatment of various eye diseases.

Pegaptanib sodium (Macugen) is approved by the US Food and Drug Administration (FDA) for the treatment of patients with neovascular (wet) age-related macular degeneration (AMD) [September 2004]. Ranibizumab (Lucentis) is approved for the treatment of patients with neovascular (wet) AMD [June 2006], macular edema after retinal vein occlusion (RVO) [June 2010], diabetic macular edema (DME) [August 2012], diabetic retinopathy in patients with DME [February 2015], and myopic choroidal neovascularization (mCNV) [January 2017]. The first biosimilar for Lucentis, ranibizumab-nuna (Byooviz) was approved by the FDA in September 2021 and carries indications for neovascular (wet) AMD, macular edema following RVO, and mCNV. The approval was based on the totality of evidence demonstrating biosimilarity, including a randomized phase 3 study in 705 patients with wet AMD. Results showed that after 24 weeks of monthly treatment with either Lucentis or Byooviz, the least square mean change in best corrected visual acuity (BCVA) from baseline to week 8 were 6.2 and 7.2 letters, respectively. The adjusted treatment difference between groups was -0.8 letters (90% CI, -1.8 to

0.2 letters), which was within the predefined equivalence limits of -3 to 3 letters. While Byooviz is not FDA approved for diabetic macular edema or diabetic retinopathy, efficacy may be extrapolated based on biosimilarity. In August 2022, the FDA approved ranibizumab-eqrn (Cimerli), as a Lucentis interchangeable biosimilar. Its indications include neovascular AMD (wet), macular edema following RVO, mCNV, DME, and diabetic retinopathy. The efficacy and safety of ranibizumab-eqrn (Cimerli) for neovascular AMD (wet) was evaluated in 1323 patients total (ranibizumab-eqrn 879 and control 444) among three trials; in general, most patients (90%-95%) maintained vision, defined as losing fewer than 15 letters of visual acuity at 12 months compared with baseline. Ranibizumab-eqrn (Cimerli) for macular edema following RVO was assessed in 523 patients (ranibizumab-eqrn 262 and control 261) in two trials. Forty-eight to 61 percent of patients receiving ranibizumab-eqrn (Cimerli) demonstrated a gain of greater than or equal to 15 letters in visual acuity. Two hundred seventy-seven patients (ranibizumab-eqrn 222 and control 55 patients) were evaluated for mCNV; ranibizumab-eqrn (Cimerli) demonstrated a mean change of 12 letters in Best Corrected Visual Acuity from baseline and 37.1-40.5% of patients gained greater than or equal to 15 letters from baseline. The efficacy and safety of ranibizumab-eqrn (Cimerli) for DME and diabetic retinopathy (DR) were evaluated together in two studies [(ranibizumab-eqrn 250 and control 257 for DME) and (ranibizumab-eqrn 239 and control 234 for DR)]. Outcomes for ranibizumab-eqrn (Cimerli) for DME included a 34-45% gain of greater than or equal to 15 letters in visual acuity, 98% of patients loss less than 15 letters in visual acuity, and there was a 10.9-12.5 mean letter increase from baseline. For DR outcomes, 37-39% of ranibizumab-eqrn patients had a two step or greater improvement and 9-17% of ranibizumab-eqrn patients had a three step or greater improvement from baseline for Early Treatment Diabetic Retinopathy Study Diabetic Retinopathy Severity Scores.

Brolucizumab (Beovu) is approved by the FDA for the treatment of patients with Neovascular (Wet) AMD [October 2019] and DME [May 2022]. Additionally, aflibercept (Eylea) is approved for the treatment of patients with neovascular (Wet) AMD [November 2011], macular edema following central retinal vein occlusion (CRVO) [September 2012], DME [July 2014], and macular edema following RVO [October 2014, an expansion of CRVO indication]. Aflibercept (Eylea) was granted orphan designation by the FDA for the treatment of retinopathy of prematurity in July 2019. On August 18, 2023, the FDA approved Eylea HD, which is a high-dose formulation of aflibercept allowing longer dosing intervals of 8 to 16 weeks. Eylea HD is indicated for the treatment of patients with neovascular (Wet) AMD, DME, and DR; its efficacy and safety were evaluated in two randomized, multi-center, double-masked, active-controlled studies [PHOTON (n=658) and PULSAR (n=1009)]. Following three initial monthly doses, patients enrolled in these studies were administered either aflibercept 2 mg every 8 weeks or 8 mg every 12 or 16 weeks. Results demonstrated that the high-dose regimens were non-inferior and clinically equivalent to the 2 mg treatment regimen with respect to the change in Best Corrected Visual Acuity, which was the primary endpoint.

In October 2021, the FDA approved a more concentrated formulation of ranibizumab (brand name Susvimo) for use in an ocular implant (the Susvimo implant) for the treatment of patients with neovascular (wet) AMD who have previously responded to at least two intravitreal injections of a VEGF inhibitor. Susvimo has a concentration of 100 mg/mL while Lucentis has a concentration of either 6 mg/mL or 10 mg/mL. The initial fill and ocular implant insertion, and 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. 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. Susvimo has a boxed warning for endophthalmitis because the implant has been associated with a 3-fold higher rate of endophthalmitis than monthly intravitreal injections of ranibizumab. On October 18, 2022, Genentech issued a voluntary recall of the Susvimo ocular implant and insertion tool assembly, pausing all new implantations. The recall does not apply to the ranibizumab injection (Susvimo) refill medication, refill needle or the explant tool to continue support of current patients. Quality management testing of the septum of the implant over the long-term via multiple refills (i.e., repeated puncturing of the implant with a needle) failed to meet the manufacturer's standard. For current implant patients, providers are reminded to examine the implant in the vitreous cavity through the dilated pupil prior to and after the refill-exchange procedure. Further refill-exchange procedures should not be performed if septum dislodgement occurs because normal device functioning cannot be assured. The decision whether to keep or remove an implant with a dislodged septum should involve a discussion of the provider and patient and evaluation of potential risks (e.g., implant removal procedure) and benefits.

In January 2022, the FDA approved faricimab-svoa (Vabysmo) for the treatment of neovascular (wet) AMD and DME. Faricimab is unique compared to other VEGF-inhibitors as it is a bispecific monoclonal antibody that independently binds and neutralizes both VEGF-A and angiopoietin-2 (Ang-2). Ang-2 levels are elevated in the vitreous of patients with retinal vascular diseases. Neutralization of Ang-2 may have the potential to normalize pathologic ocular vasculature through restored Ang-1/Tie2 activation and reduce levels of inflammatory drivers, leading to a disease-modifying effect compared with anti-VEGF monotherapy alone. However, the contribution of Ang-2 inhibition to the treatment effect and clinical response for AMD and DME has yet to be established. In two randomized Phase 3 clinical trials for the treatment of newly diagnosed, treatment-naïve patients with neovascular (wet) AMD (TENAYA and LUCERNE), faricimab was found to be non-inferiority to the comparator control (aflibercept 2 mg every 8 weeks, after 3 initial monthly doses) at the primary endpoint, defined as the mean change from baseline in Best Corrected Visual Acuity (BCVA), measured by the ETDRS Letter Score, averaged over the week 40, 44, and 48 visits. Faricimab was dosed as 6 mg every 4 weeks for the first 4 doses, followed by OCT and visual acuity evaluations 8 and 12 weeks later to determine whether to give a 6 mg dose on one of the following three regimens (1) weeks 28 and 44 (every 16 week dosing); (2) weeks 24, 36 and 48 (every 12 week dosing); or (3) weeks 20, 28, 36 and 44 (every 8 week dosing). Of note, the utility of these criteria to guide dosing intervals has not been established. At week 48, 45% of patients received every 16-week dosing, 33% of patients received every 12-week dosing, and the remaining 22% of patients received dosing every 8 weeks. These percentages are reflective of what happened within the conduct of these trials and indicate that some patients did well on doses separated by 12 and 16 weeks, but the percentages may not be generalizable to a broader AMD population for a variety of reasons.

In two randomized Phase 3 clinical trials for the treatment of DME (YOSEMITE and RHINE), faricimab fixed dosing and variable dosing were found to be non-inferiority to the comparator control (aflibercept fixed dosing) at the primary endpoint, defined as the mean change from baseline in BCVA at year 1 (average of the week 48, 52, and 56 visits), measured by the ETDRS Letter Score. The overall population included both anti-VEGF naïve patients (78%) and patients who had been previously treated with a VEGF inhibitor prior to study participation (22%). Patients were randomized in a 1:1:1 ratio to one of three treatment regimens: (1) aflibercept 2 mg every 8 weeks (after five initial monthly doses); (2) faricimab every 8 weeks (after six initial monthly doses); and (3) faricimab variable dosing - 6 mg every 4 weeks for

at least 4 doses and until the central subfield thickness (CST) of the macula measured by OCT was less than approximately 325 microns, then the interval of dosing was modified by up to 4 week interval extensions or reductions in up to 8 week interval increments based on CST and visual acuity disease activity criteria at study drug dosing visits. After the four initial monthly doses, the patients in the faricimab variable arm could have received between the minimum of three and the maximum of eleven total injections through Week 56. At week 56, 32% of patients had completed at least one 12-week interval followed by one full 16-week interval. Seventeen percent (17%) of patients were treated on every 8 week and/or every 4-week dosing intervals through Week 56 (7% only on every 4 week). Sustainability of every 16-week dosing interval cannot be determined based on year one data alone.

On October 26, 2023, the FDA approved faricimab (Vabysmo) for the treatment of macular edema following retinal vein occlusion (RVO). The approval was based on the results of two randomized, multicenter, double-masked, clinical trials [BALATON (n=553) and COMINO (n=729)]. Newly diagnosed, treatment-naive patients were randomized in a 1:1 ratio to either faricimab 6 mg or aflibercept 2 mg injections every 4 weeks for a total of 6 injections. Faricimab (Vabysmo) 6 mg every 4 weeks demonstrated non-inferiority to aflibercept 2 mg every 4 weeks based on the primary endpoint, which was defined as the change from baseline in BCVA at week 24, measured by the ETDRS Letter Score.

In April 2017 ranibizumab (Lucentis) became the first VEGF-inhibitor to be FDA-approved for the treatment of diabetic retinopathy (DR) in patients without diabetic macular edema (DME). The approval was based on a subgroup analysis of a secondary endpoint in the Diabetic Retinopathy Clinical Research Network's (DRCR.net) Protocol S study in which ranibizumab was found to be non-inferior to panretinal photocoagulation (PRP) in patients with proliferative diabetic retinopathy (PDR), including those with and without DME. Proliferative DR, as opposed to non-proliferative DR (NPDR), is defined by the presence of some degree of retinal neovascularization. The VEGF-inhibitors work by inhibiting angiogenesis and neovascularization. At year 2 among patients treated with ranibizumab, 31.7% (13/41) and 28.4% (42/148) of eyes in the subgroups with baseline DME and without baseline DME, respectively, had ≥ 3 -step improvement from baseline in ETDRS-DRSS (Early Treatment Diabetic Retinopathy Study Diabetic Retinopathy Severity Score).

In May 2019 aflibercept (Eylea) became the second VEGF-inhibitor to be FDA-approved for the treatment of diabetic retinopathy (DR) in patients without diabetic macular edema (DME). The approval was based on data derived from the VIVID and VISTA studies (patients with DME and DR) and the PANORAMA study. A major difference between the aflibercept and ranibizumab approvals is that aflibercept was evaluated in a randomized, multi-center, double-masked, controlled study specifically looking at patients with moderately severe to severe nonproliferative diabetic retinopathy (NPDR) (ETDRS-DRSS of 47 or 53), without central-involved DME [i.e., PANORAMA trial]. A total of 402 randomized patients were evaluable for efficacy. Patients were randomly assigned in a 1:1:1 ratio to 1 of 3 dosing regimens: (1) 3 initial monthly aflibercept 2 mg injections followed by one injection after 8 weeks and then one injection every 16 weeks (EYLEA 2Q16); (2) 5 monthly aflibercept 2 mg injections followed by one injection every 8 weeks (EYLEA 2Q8); and (3) sham treatment. The primary efficacy endpoint was the proportion of patients who improved by ≥ 2 steps on the DRSS from baseline to week 24 in the combined aflibercept groups and at week 52 in the 2Q16 and 2Q8 groups individually vs. sham. A key secondary endpoint was the proportion of patients developing the composite endpoint of proliferative diabetic retinopathy or anterior segment neovascularization through week 52. Results are seen in Table 1 below.

Table 1

	Week 24		Week 52		
	Eylea Combined (n=269)	Control (n=133)	Eylea 2Q16 (n=135)	Eylea 2Q8 (n=134)	Control (n=133)
Patients with a ≥ 2 -step improvement on ETDRS-DRSS from Baseline	58%	6%	65%	80%	15%
Composite Endpoint of Developing PDR or ASNV	N/A	N/A	4%	2.4%	20.1%
Development of PDR	N/A	N/A	1.6%	0%	11.9%

PDR = Proliferative Diabetic Retinopathy; ASNV = Anterior Segment Neovascularization

A brief overview of covered products is provided in Table 2.

Table 2

Review of covered products	
Product	Notes
Aflibercept (Eylea, Eylea HD)	<ul style="list-style-type: none"> Humanized recombinant fusion protein Inhibits VEGF-A and placental growth factor
Bevacizumab (Avastin) and bevacizumab biosimilars [bevacizumab-awwb (Mvasi) and bevacizumab-awwb (Zirabev)]	<ul style="list-style-type: none"> Recombinant humanized monoclonal antibody Works by binding to and inhibiting the biologic activity of VEGF to prevent interaction with receptors on the surface of endothelial cells Prevents cell proliferation and new blood vessel formation Produced in a Chinese hamster ovary mammalian cell expression system
Brolucizumab (Beovu)	<ul style="list-style-type: none"> Recombinant humanized monoclonal single-chain Fv antibody fragment Binds to the three major isoforms of VEGF-A (e.g., VEGF110, VEGF121, and VEGF165) Suppresses endothelial cell proliferation, neovascularization, and vascular permeability
Faricimab (Vabysmo)	<ul style="list-style-type: none"> Humanized bispecific immunoglobulin G1 (IgG1) antibody Binds both vascular endothelial growth factor A (VEGF-A) and angiopoietin-2 (Ang-2) By inhibiting VEGF-A, faricimab suppresses endothelial cell proliferation, neovascularization, and vascular permeability. By inhibiting Ang-2, faricimab is thought to promote vascular stability and desensitize blood vessels to the effects of VEGF-A. The

	contribution of Ang-2 inhibition to the treatment effect and clinical response for nAMD and DME has yet to be established.
Pegaptanib (Macugen)	<ul style="list-style-type: none"> • Pegylated modified oligonucleotide • Selectively binds to extracellular VEGF-165, the major pathological VEGF isoform for wet AMD
Ranibizumab (Lucentis)	<ul style="list-style-type: none"> • Recombinant humanized monoclonal antibody – a fragment derived from the same parent molecule as bevacizumab • Binds to all active isoforms of VEGF • Reduces endothelial cell proliferation, vascular leakage, and new blood vessel formation
Ranibizumab-nuna (Byooviz)	<ul style="list-style-type: none"> • Biosimilar of ranibizumab (Lucentis)
Ranibizumab-eqrn (Cimerli)	<ul style="list-style-type: none"> • Biosimilar of ranibizumab (Lucentis)

POSITION STATEMENT:

The initiation of aflibercept (Eylea, Eylea HD), bevacizumab (including biosimilars), brolucizumab (Beovu), faricimab (Vabysmo), pegaptanib (Macugen), ranibizumab (Lucentis), ranibizumab-nuna (Byooviz), and ranibizumab-eqrn (Cimerli) **meets the definition of medical necessity** for members meeting agent-specific criteria outlined in Table 3, **AND** none of these products are used concurrently in combination with each other in the same eye [with the exception of Susvimo and Lucentis, Byooviz, or Cimerli for which Lucentis, Byooviz, or Cimerli may be used as periodic rescue therapy for breakthrough symptoms in patients receiving treatment with Susvimo], or used in combination with dexamethasone (Ozurdex) implant or fluocinolone acetonide (Iluvien, Retisert, Yutiq) implant in the same eye as continuous maintenance therapy [with the exception of bevacizumab or bevacizumab biosimilars which may be used as rescue therapy for rare members who are refractory to the implant]. For Iluvien only, aflibercept, bevacizumab (including biosimilars), brolucizumab, faricimab, pegaptanib, ranibizumab, ranibizumab-nuna, or ranibizumab-eqrn may be used as periodic rescue therapy for breakthrough symptoms.

Table 3

Criteria for use	
Product	Criteria
Aflibercept (Eylea)	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections and dosage does not exceed 2 mg to each eye every 28 days (except retinopathy of prematurity which is a single dose only per eye):</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD)

	<ol style="list-style-type: none"> 2. Macular edema following central retinal vein occlusion (CRVO) 3. Macular edema following branch retinal vein occlusion (BRVO) 4. Diabetic macular edema (DME) 5. Diabetic retinopathy (DR) in members with DME 6. Moderately-severe to severe non-proliferative diabetic retinopathy (NPDR) (with or without macular edema) – the member’s Early Treatment Diabetic Retinopathy Study (ETDRS) Diabetic Retinopathy Severity Scale score demonstrating at least moderately-severe disease (i.e., 47 or greater) must be provided 7. Proliferative diabetic retinopathy (PDR) as defined by the presence of retinal neovascularization (with or without macular edema) 8. Retinopathy of prematurity when first-line treatment with laser photocoagulation is not possible (e.g., opaque cornea or lens, poor pupillary dilation) and treatment is given as a single dose
<p>Aflibercept (Eylea HD)</p>	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections and dosage does not exceed 8 mg to each eye every 28 days for the first three doses followed by 8 mg to each eye every 8 to 16 weeks:</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) 2. Diabetic macular edema (DME) 3. Diabetic retinopathy (DR)
<p>Bevacizumab (Avastin) and bevacizumab biosimilars [bevacizumab-awwb (Mvasi) and bevacizumab-awwb (Zirabev)]</p>	<p>Use is a medical necessity for the below listed non-FDA labeled* indications in members without ocular or periocular infections:</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) 2. Macular edema following branch retinal vein occlusion (BRVO) 3. Macular edema following central retinal vein occlusion (CRVO) 4. Diabetic macular edema (DME) 5. Diabetic retinopathy (DR) 6. Neovascularization of the iris (NVI) (rubeosis iridis) 7. Polypoidal choroidal vasculopathy (PCV) 8. Proliferative diabetic retinopathy (PDR) as defined by the presence of retinal neovascularization (with or without macular edema) 9. Proliferative diabetic retinopathy requiring treatment with retinal laser photocoagulation or vitrectomy as a single preoperative dose 10. Secondary angle-closure glaucoma resulting from neovascularization (i.e., neovascular glaucoma) 11. Radiation retinopathy

	<p>12. Retinopathy of prematurity when first-line treatment with laser photocoagulation is not possible (e.g., opaque cornea or lens, poor pupillary dilation) and treatment is given as a single dose</p> <p>13. Choroidal neovascularization secondary to ANY of the following:</p> <ul style="list-style-type: none"> a. Pathologic myopia (i.e., myopic choroidal neovascularization) b. Ocular histoplasmosis syndrome (OHS) c. Angioid streaks/pseudoxanthoma elasticum <p><i>*Physicians should provide appropriate informed consent with respect to the off-label use of bevacizumab.</i></p>
Brolucizumab (Beovu)	<p>Use is a medical necessity for the following indication(s) in members without ocular or periocular infections:</p> <ul style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) and dosage does not exceed 6 mg to each eye every 4 weeks (28 days) for the first three doses, and then every 8 weeks (56 days) for subsequent doses 2. Diabetic macular edema (DME) and dosage does not exceed 6 mg to each eye every 6 weeks (42 days) for the first five doses, and then every 8 weeks (56 days) for subsequent doses
Faricimab (Vabysmo)	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections, without active intraocular inflammation, and dosage does not exceed 6 mg to each eye every 4 weeks (28 days):</p> <ul style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) 2. Diabetic macular edema (DME) 3. Macular Edema Following Retinal Vein Occlusion (RVO)
Pegaptanib (Macugen)	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections and dosage does not exceed 0.3 mg to each eye every 6 weeks (45 days):</p> <ul style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) 2. Diabetic macular edema (DME)
Ranibizumab (Lucentis) [6 mg/ml and 10 mg/mL solution]	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections:</p> <ul style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) and dosage does not exceed 0.5 mg to each eye every 28 days 2. Macular edema following branch retinal vein occlusion (BRVO) and dosage does not exceed 0.5 mg to each eye every 28 days

	<ol style="list-style-type: none"> 3. Macular edema following central retinal vein occlusion (CRVO) and dosage does not exceed 0.5 mg every to each eye 28 days 4. Diabetic macular edema (DME) and dosage does not exceed 0.3 mg to each eye every 28 days 5. Diabetic retinopathy (DR) in members with DME and dosage does not exceed 0.3 mg to each eye every 28 days 6. Proliferative diabetic retinopathy (PDR) as defined by the presence of retinal neovascularization (with or without macular edema) and dosage does not exceed 0.3 mg to each eye every 28 days 7. Choroidal neovascularization secondary to ANY of the following and dosage does not exceed 0.5 mg to each eye every 28 days: <ol style="list-style-type: none"> a. Pathologic myopia (i.e., myopic choroidal neovascularization) b. Ocular histoplasmosis syndrome (OHS) c. Angioid streaks/pseudoxanthoma elasticum 8. Retinopathy of prematurity when first-line treatment with laser photocoagulation is not possible (e.g., opaque cornea or lens, poor pupillary dilation) and treatment is given as a single dose that does not exceed 0.3 mg to each eye
<p>Ranibizumab-nuna (Byooviz)</p>	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections:</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) and dosage does not exceed 0.5 mg to each eye every 28 days 2. Macular edema following branch retinal vein occlusion (BRVO) and dosage does not exceed 0.5 mg to each eye every 28 days 3. Macular edema following central retinal vein occlusion (CRVO) and dosage does not exceed 0.5 mg every to each eye 28 days 4. Diabetic macular edema (DME) and dosage does not exceed 0.3 mg to each eye every 28 days 5. Diabetic retinopathy (DR) in members with DME and dosage does not exceed 0.3 mg to each eye every 28 days 6. Proliferative diabetic retinopathy (PDR) as defined by the presence of retinal neovascularization (with or without macular edema) and dosage does not exceed 0.3 mg to each eye every 28 days 7. Choroidal neovascularization secondary to ANY of the following and dosage does not exceed 0.5 mg to each eye every 28 days: <ol style="list-style-type: none"> a. Pathologic myopia (i.e., myopic choroidal neovascularization) b. Ocular histoplasmosis syndrome (OHS) c. Anilid streaks/pseudoxanthoma elasticum

	<p>8. Retinopathy of prematurity when first-line treatment with laser photocoagulation is not possible (e.g., opaque cornea or lens, poor pupillary dilation) and treatment is given as a single dose that does not exceed 0.3 mg to each eye</p>
<p>Ranibizumab-eqrn (Cimerli)</p>	<p>Use is a medical necessity for the following indications in members without ocular or periocular infections:</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) and dosage does not exceed 0.5 mg to each eye every 28 days 2. Macular edema following branch retinal vein occlusion (BRVO) and dosage does not exceed 0.5 mg to each eye every 28 days 3. Macular edema following central retinal vein occlusion (CRVO) and dosage does not exceed 0.5 mg every to each eye 28 days 4. Diabetic macular edema (DME) and dosage does not exceed 0.3 mg to each eye every 28 days 5. Diabetic retinopathy (DR) in members with DME and dosage does not exceed 0.3 mg to each eye every 28 days 6. Proliferative diabetic retinopathy (PDR) as defined by the presence of retinal neovascularization (with or without macular edema) and dosage does not exceed 0.3 mg to each eye every 28 days 7. Choroidal neovascularization secondary to ANY of the following and dosage does not exceed 0.5 mg to each eye every 28 days: <ol style="list-style-type: none"> a. Pathologic myopia (i.e., myopic choroidal neovascularization) b. Ocular histoplasmosis syndrome (OHS) c. Angioid streaks/pseudoxanthoma elasticum <p>Retinopathy of prematurity when first-line treatment with laser photocoagulation is not possible (e.g., opaque cornea or lens, poor pupillary dilation) and treatment is given as a single dose that does not exceed 0.3 mg to each eye</p>
<p>Ranibizumab for Ocular Implant (Susvimo) [100 mg/mL solution]</p>	<p>No new product initiation approvals. Use is a medical necessity only for the continuation of therapy for the following indication(s) in members without ocular or periocular infections, without active intraocular inflammation, and dosage does not exceed 2 mg to each eye every 24 weeks:</p> <ol style="list-style-type: none"> 1. Neovascular (wet) age-related macular degeneration (ARMD/AMD) AND the member has previously responded to at least TWO intravitreal injections of a VEGF inhibitor medication

Approval duration: 1 year (except retinopathy of prematurity and pre-operative use for diabetic retinopathy requiring treatment with retinal laser photocoagulation or vitrectomy; for these indications only, a single dose will be approved)

Continuation of aflibercept (Eylea, Eylea HD), bevacizumab (including biosimilars), brolocizumab (Beovu), faricimab (Vabysmo), pegaptanib (Macugen), ranibizumab (Lucentis), ranibizumab-nuna (Byooviz), ranibizumab-eqrn (Cimerli), and ranibizumab implant (Susvimo) **meets the definition of medical necessity** for members meeting all of the following criteria (“1” to “6”):

1. An authorization or reauthorization has been previously approved by Florida Blue or another health plan in the past two years for an indication listed in Table 3 [except for the use of aflibercept or bevacizumab (including biosimilars) for retinopathy of prematurity or as a single preoperative dose – see initiation criteria], **OR** the member has previously met all indication-specific initiation criteria.
2. Member has had improvement or stabilization of visual function as compared to before treatment.
3. The dosage does not exceed the drug- and indication-specific limit listed in Table 3.
4. Member is without ocular or periocular infections, and, for Susvimo and Vabysmo only, member is without active intraocular inflammation.
5. None of the agents are used in combination with each other in the same eye [with the exception of Susvimo and Lucentis, Byooviz, or Cimerli for which Lucentis, Byooviz, or Cimerli may be used as periodic rescue therapy for breakthrough symptoms in patients receiving treatment with Susvimo].
6. Beovu, Byooviz, Cimerli, Eylea, Eylea HD, Lucentis, Macugen, Susvimo, or Vabysmo are not used as continuous maintenance therapy in combination with dexamethasone (Ozurdex) implant or fluocinolone acetonide (Iluvien, Retisert, Yutiq) implant in the same eye*.

**Beovu, Byooviz, Cimerli, Eylea, Eylea HD, Lucentis, Macugen, or Vabysmo may be used as periodic rescue therapy for breakthrough symptoms in patients receiving treatment with a fluocinolone acetonide (Iluvien) implant.*

Approval duration: 1 year

DOSAGE/ADMINISTRATION:

THIS INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED AS A SOURCE FOR MAKING PRESCRIBING OR OTHER MEDICAL DETERMINATIONS. PROVIDERS SHOULD REFER TO THE MANUFACTURER’S FULL PRESCRIBING INFORMATION FOR DOSAGE GUIDELINES AND OTHER INFORMATION RELATED TO THIS MEDICATION BEFORE MAKING ANY CLINICAL DECISIONS REGARDING ITS USAGE.

Dosage and administration vary considerably with each product. A brief overview of selected products is provided in Table 3, but it is **strongly recommended** the prescriber reference the product-specific labeling for complete dosing and administration instructions.

Table 4

Dosage and administration	
Product	Dosing/Administration
Aflibercept (Eylea)	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> • 2 mg (0.05 mL) administered by intravitreal injection every 4 weeks (monthly) for the first 12 weeks (3 months), followed by 2 mg (0.05 mL) via intravitreal injection once every 8 weeks (2 months)

	<ul style="list-style-type: none"> • May be dosed as frequently as 2 mg every 4 weeks (monthly); however, additional efficacy was not demonstrated in most patients when dosed every 4 weeks compared to every 8 weeks. Some patients may need every 4-week (monthly) dosing after the first 12 weeks (3 months). Although not as effective as the recommended every 8-week dosing regimen, patients may also be treated with one dose every 12 weeks after one year of effective therapy. Patients should be assessed regularly. <p>Macular Edema Following Retinal Vein Occlusion (RVO) – includes both central and branch RVO (CRVO and BRVO)</p> <ul style="list-style-type: none"> • 2 mg (0.05 mL) administered by intravitreal injection once every 4 weeks (monthly) <p>Diabetic Macular Edema (DME) or Diabetic Retinopathy (DR)</p> <ul style="list-style-type: none"> • 2 mg (0.05 mL) administered by intravitreal injection every 4 weeks (monthly) for the first five injections, followed by 2 mg (0.05 mL) via intravitreal injection once every 8 weeks (2 months) • May be dosed as frequently as 2 mg every 4 weeks (monthly); however, additional efficacy was not demonstrated in most patients when dosed every 4 weeks compared to every 8 weeks. Some patients may need every 4-week (monthly) dosing after the first 20 weeks (5 months).
<p>Aflibercept (Eylea HD)</p>	<p>Neovascular (Wet) Age-Related Macular Degeneration (nAMD)</p> <ul style="list-style-type: none"> • 8 mg (0.07 mL) administered by intravitreal injection every 4 weeks (monthly) for the first three doses, followed by 8 mg (0.07 mL) via intravitreal injection once every 8 to 16 weeks. <p>Diabetic Macular Edema (DME)</p> <ul style="list-style-type: none"> • 8 mg (0.07 mL) administered by intravitreal injection every 4 weeks (monthly) for the first three doses, followed by 8 mg (0.07 mL) via intravitreal injection once every 8 to 16 weeks. <p>Diabetic Retinopathy (DR)</p> <ul style="list-style-type: none"> • 8 mg (0.07 mL) administered by intravitreal injection every 4 weeks (monthly) for the first three doses, followed by 8 mg (0.07 mL) via intravitreal injection once every 8 to 12 weeks.
<p>Bevacizumab (Avastin) and bevacizumab biosimilars [bevacizumab-awwb (Mvasi) and bevacizumab-awwb (Zirabev)]</p>	<p>Off-label dosing recommendations</p> <ul style="list-style-type: none"> • 1.25 mg (0.05 mL) administered by intravitreal injection

<p>Brolucizumab (Beovu)</p>	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> 6 mg (0.05 mL) administered by intravitreal injection monthly (approximately every 25 to 31 days) for the first three doses, followed by 6 mg (0.05 mL) once every 8 to 12 weeks. <p>Diabetic Macular Edema (DME)</p> <ul style="list-style-type: none"> 6 mg (0.05 mL) administered by intravitreal injection every 6 weeks (approximately every 39 to 45 days) for the first five doses, followed by 6 mg (0.05 mL) once every 8 to 12 weeks.
<p>Faricimab (Vabysmo)</p>	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> 6 mg (0.05 mL) administered by intravitreal injection every 4 weeks (approximately every 28±7 days, monthly) for the first four doses, followed by followed by optical coherence tomography and visual acuity evaluations 8 and 12 weeks later to inform whether to give a 6 mg dose on one of the following three regimens: <ul style="list-style-type: none"> Weeks 28 and 44 Weeks 24, 36 and 48 Weeks 20, 28, 36 and 44 Although additional efficacy was not demonstrated in most patients when faricimab was dosed every 4 weeks compared to every 8 weeks, some patients may need every 4-week (monthly) dosing after the first 4 doses. Patients should be assessed regularly. <p>Diabetic Macular Edema (DME)</p> <ul style="list-style-type: none"> Either of the following regimens: <ul style="list-style-type: none"> 6 mg (0.05 mL) administered by intravitreal injection every 4 weeks (approximately every 28 days±7 days, monthly) for at least 4 doses. If after at least 4 doses, resolution of edema based on the central subfield thickness (CST) of the macula as measured by optical coherence tomography is achieved, then the interval of dosing may be modified by extensions of up to 4-week interval increments or reductions of up to 8-week interval increments based on CST and visual acuity evaluations through week 52 6 mg every 4 weeks for the first 6 doses, followed by 6 mg dose via intravitreal injection at intervals of every 8 weeks (2 months) over the next 28 weeks. Although additional efficacy was not demonstrated in most patients when faricimab was dosed every 4 weeks compared to every 8 weeks, some patients may need every 4-week (monthly) dosing after the first 4 doses. Patients should be assessed regularly.

	<p>Macular Edema Following Retinal Vein Occlusion (RVO)</p> <ul style="list-style-type: none"> 6 mg (0.05 mL of 120 mg/mL) administered by intravitreal injection every 4 weeks (approximately every 28 ± 7 days, monthly) for 6 months.
Pegaptanib (Macugen)	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> 0.3 mg should be administered once every six weeks by intravitreal injection into the eye to be treated
Ranibizumab (Lucentis)	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> 0.5 mg (0.05 mL of 10 mg/mL solution) is recommended to be administered by intravitreal injection once a month (approximately 28 days) Although not as effective, patients may be treated with three monthly doses followed by less frequent dosing with regular assessment. In the nine months after three initial monthly doses, less frequent dosing with 4-5 doses on average is expected to maintain visual acuity while monthly dosing may be expected to result in an additional average 1-2 letter gain. Patients should be assessed regularly. Although not as effective, patients may also be treated with one dose every 3 months after 4 monthly doses. Compared to continued monthly dosing, dosing every 3 months over the next 9 months will lead to an approximate 5-letter (1-line) loss of visual acuity benefit, on average. Patients should be assessed regularly. <p>Macular Edema Following Retinal Vein Occlusion (RVO) – includes both central and branch RVO (CRVO and BRVO)</p> <ul style="list-style-type: none"> 0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) <p>Diabetic Macular Edema (DME) or Diabetic Retinopathy (DR)</p> <ul style="list-style-type: none"> 0.3 mg (0.05 mL of 6 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) <p>Myopic Choroidal Neovascularization (mCNV)</p> <ul style="list-style-type: none"> 0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) for up to 3 months. May retreat if needed.
Ranibizumab-nuna (Byooviz)	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> 0.5 mg (0.05 mL of 10 mg/mL solution) is recommended to be administered by intravitreal injection once a month (approximately 28 days)

	<ul style="list-style-type: none"> • Although not as effective, patients may be treated with three monthly doses followed by less frequent dosing with regular assessment. In the nine months after three initial monthly doses, less frequent dosing with 4-5 doses on average is expected to maintain visual acuity while monthly dosing may be expected to result in an additional average 1-2 letter gain. Patients should be assessed regularly. • Although not as effective, patients may also be treated with one dose every 3 months after 4 monthly doses. Compared to continued monthly dosing, dosing every 3 months over the next 9 months will lead to an approximate 5-letter (1-line) loss of visual acuity benefit, on average. Patients should be assessed regularly. <p>Macular Edema Following Retinal Vein Occlusion (RVO) – includes both central and branch RVO (CRVO and BRVO)</p> <ul style="list-style-type: none"> • 0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) <p>Myopic Choroidal Neovascularization (mCNV)</p> <ul style="list-style-type: none"> • 0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) for up to 3 months. May retreat if needed.
<p>Ranibizumab-eqrn (Cimerli)</p>	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD)</p> <ul style="list-style-type: none"> • 0.5 mg (0.05 mL of 10 mg/mL solution) is recommended to be administered by intravitreal injection once a month (approximately 28 days) • Although not as effective, patients may be treated with three monthly doses followed by less frequent dosing with regular assessment. In the nine months after three initial monthly doses, less frequent dosing with 4-5 doses on average is expected to maintain visual acuity while monthly dosing may be expected to result in an additional average 1-2 letter gain. Patients should be assessed regularly. • Although not as effective, patients may also be treated with one dose every 3 months after 4 monthly doses. Compared to continued monthly dosing, dosing every 3 months over the next 9 months will lead to an approximate 5-letter (1-line) loss of visual acuity benefit, on average. Patients should be assessed regularly. <p>Macular Edema Following Retinal Vein Occlusion (RVO) – includes both central and branch RVO (CRVO and BRVO)</p> <ul style="list-style-type: none"> • 0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) <p>Diabetic Macular Edema (DME) or Diabetic Retinopathy (DR)</p>

	<ul style="list-style-type: none"> 0.3 mg (0.05 mL of 6 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) <p>Myopic Choroidal Neovascularization (mCNV)</p> <p>0.5 mg (0.05 mL of 10 mg/mL solution) administered by intravitreal injection once a month (approximately 28 days) for up to 3 months. May retreat if needed.</p>
Ranibizumab for Ocular Implant (Susvimo)	<p>Neovascular (Wet) Age-Related Macular Degeneration (AMD) in patients who have previously responded to at least two intravitreal injections of a VEGF inhibitor medication</p> <ul style="list-style-type: none"> 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) <ul style="list-style-type: none"> The implant removal procedure must be performed under aseptic conditions in an operating room by a physician experienced in vitreoretinal surgery. The refill-exchange procedures must be performed under aseptic conditions by a physician experienced in ophthalmic surgery. Appropriate handling and insertion of the refill needle into the septum (avoid twisting and/or rotation) is required to minimize the risk of septum dislodgement. Supplemental treatment with 0.5 mg (0.05 mL of 10 mg/mL) intravitreal ranibizumab injection (Lucentis) may be administered in the affected eye while the implant is in place and if clinically necessary

PRECAUTIONS:

Specific precautions and warnings are highlighted in Table 5.

Table 5

Precautions and warnings	
Product	Precautions/Warnings
Aflibercept (Eylea)	<p>Contraindications</p> <ul style="list-style-type: none"> Ocular or periocular infection Active intraocular inflammation Hypersensitivity to aflibercept or any of the excipients. Hypersensitivity reactions may manifest as rash, pruritus, urticaria, severe anaphylactic/anaphylactoid reactions, or severe intraocular inflammation. <p>Precautions/Warnings</p>

	<ul style="list-style-type: none"> ● Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with aflibercept, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique must always be used when administering. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately. ● Increases in Intraocular Pressure - Increases in intraocular pressure have been seen within 60 minutes of an intravitreal injection. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with vascular endothelial growth factor (VEGF) inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately. ● Thromboembolic Events - There is a potential risk of arterial thromboembolic events following intravitreal use of VEGF inhibitors.
Aflibercept (Eylea HD)	<p>Contraindications</p> <ul style="list-style-type: none"> ● Ocular or periocular infection ● Active intraocular inflammation ● Hypersensitivity to aflibercept or any of the excipients. Hypersensitivity reactions may manifest as rash, pruritus, urticaria, severe anaphylactic/anaphylactoid reactions, or severe intraocular inflammation. <p>Precautions/Warnings</p> <ul style="list-style-type: none"> ● Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with aflibercept, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique must always be used when administering. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately. ● Increases in Intraocular Pressure - Increases in intraocular pressure have been seen within 60 minutes of an intravitreal injection. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with vascular endothelial growth factor (VEGF) inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately. ● Thromboembolic Events - There is a potential risk of arterial thromboembolic events following intravitreal use of VEGF inhibitors.
Brolucizumab (Beovu)	<p>Contraindications</p> <ul style="list-style-type: none"> ● Ocular or periocular infections

	<ul style="list-style-type: none"> • Active intraocular inflammation • Hypersensitivity to brolocizumab or any other excipient in this product <p>Precautions/Warnings</p> <ul style="list-style-type: none"> • Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with brolocizumab, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique must always be used when administering. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately. • Retinal Vasculitis and/or Retinal Vascular Occlusion - Retinal vasculitis and/or retinal vascular occlusion, typically in the presence of intraocular inflammation, have been reported with the use. Patients should be instructed to report any change in vision without delay. • Increase in Intraocular Pressure - Acute increases in intraocular pressure (IOP) have been seen within 30 minutes of an intravitreal injection. Sustained IOP increases have also been reported. Both IOP and perfusion of the optic nerve head must be monitored and managed appropriately. • Thromboembolic Events - Although there was a low rate of arterial thromboembolic events (ATEs) observed in the brolocizumab clinical trials, there is a potential risk of ATEs following intravitreal use of VEGF inhibitors. Arterial thromboembolic events are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The ATE rate in the two controlled 96-week neovascular AMD studies (HAWK and HARRIER) during the first 96-weeks was 4.5% (33 of 730) in the pooled brolocizumab arms compared with 4.7% (34 of 729) in the pooled aflibercept arms.
<p>Faricimab (Vabysmo)</p>	<p>Contraindications</p> <ul style="list-style-type: none"> • Ocular or periocular infection • Active intraocular inflammation • Known hypersensitivity to faricimab or any of the excipients in Vabysmo <p>Precautions/Warnings</p> <ul style="list-style-type: none"> • Endophthalmitis and Retinal Detachments - Intravitreal injections have been associated with endophthalmitis and retinal detachments. Proper aseptic injection techniques must always be used when administering. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay, to permit prompt and appropriate management.

	<ul style="list-style-type: none"> • Increase in Intraocular Pressure - Transient increases in intraocular pressure (IOP) have been seen within 60 minutes of intravitreal injection, including with Vabysmo. IOP and the perfusion of the optic nerve head should be monitored and managed appropriately. • Thromboembolic Events - Although there was a low rate of arterial thromboembolic events (ATEs) observed in the Vabysmo clinical trials, there is a potential risk of ATEs following intravitreal use of VEGF inhibitors. ATEs are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The incidence of reported ATEs in the nAMD studies during the first year was 1% (7 out of 664) in patients treated with Vabysmo compared with 1% (6 out of 662) in patients treated with aflibercept. The incidence of reported ATEs in the DME studies during the first year was 2% (25 out of 1,262) in patients treated with Vabysmo compared with 2% (14 out of 625) in patients treated with aflibercept.
Pegaptanib (Macugen)	<p>Contraindications</p> <ul style="list-style-type: none"> • Ocular or periocular infection • Hypersensitivity to pegaptanib sodium or any other excipient in this product <p>Precautions/Warnings</p> <ul style="list-style-type: none"> • Endophthalmitis - Intravitreal injections, including those with pegaptanib, have been associated with endophthalmitis. Proper aseptic injection technique should always be utilized when administering. In addition, patients should be monitored during the week following the injection to permit early treatment, should an infection occur. • Increases in Intraocular Pressure - Increases in intraocular pressure have been seen within 30 minutes of an intravitreal injection. Therefore, intraocular pressure as well as the perfusion of the optic nerve head should be monitored and managed appropriately. • Anaphylaxis - Rare cases of anaphylaxis/anaphylactoid reactions, including angioedema, have been reported in the postmarketing experience following the pegaptanib intravitreal administration procedure.
Ranibizumab (Lucentis)	<p>Contraindications</p> <ul style="list-style-type: none"> • Ocular or periocular infection • Hypersensitivity to ranibizumab or any of the excipients. Hypersensitivity reactions may manifest as severe intraocular inflammation. <p>Precautions/Warnings</p>

	<ul style="list-style-type: none"> ● Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with ranibizumab, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique should always be used when administering. In addition, patients should be monitored following the injection to permit early treatment should an infection occur. ● Increases in Intraocular Pressure - Increases in intraocular pressure have been noted both pre-injection and post-injection (at 60 minutes) while being treated. Monitor intraocular pressure prior to and following intravitreal injection and manage appropriately. ● Thromboembolic Events - Although there was a low rate of arterial thromboembolic events (ATEs) observed in the clinical trials, there is a potential risk of ATEs following intravitreal use of VEGF inhibitors. Arterial thromboembolic events are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). ● Fatal Events in Patients with Diabetic Macular Edema and Diabetic Retinopathy at Baseline - Fatal events occurred more frequently in patients with DME and DR at baseline, who were treated monthly with ranibizumab as compared with control. Although the rate of fatal events was low and included causes of death typical of patients with advanced diabetic complications, a potential relationship between these events and intravitreal use of VEGF inhibitors cannot be excluded.
<p>Ranibizumab-nuna (Byooviz)</p>	<p>Contraindications</p> <ul style="list-style-type: none"> ● Ocular or periocular infection ● Hypersensitivity to ranibizumab or any of the excipients. Hypersensitivity reactions may manifest as severe intraocular inflammation. <p>Precautions/Warnings</p> <ul style="list-style-type: none"> ● Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with ranibizumab, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique should always be used when administering. In addition, patients should be monitored following the injection to permit early treatment should an infection occur. ● Increases in Intraocular Pressure - Increases in intraocular pressure have been noted both pre-injection and post-injection (at 60 minutes) while being treated. Monitor intraocular pressure prior to and following intravitreal injection and manage appropriately. ● Thromboembolic Events - Although there was a low rate of arterial thromboembolic events (ATEs) observed in the clinical trials, there is a

	<p>potential risk of ATEs following intravitreal use of VEGF inhibitors. Arterial thromboembolic events are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause).</p>
<p>Ranibizumab-eqrn (Cimerli)</p>	<p>Contraindications</p> <ul style="list-style-type: none"> • Ocular or periocular infection • Hypersensitivity to ranibizumab or any of the excipients. Hypersensitivity reactions may manifest as severe intraocular inflammation. <p>Precautions/Warnings</p> <ul style="list-style-type: none"> • Endophthalmitis and Retinal Detachments - Intravitreal injections, including those with ranibizumab, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique should always be used when administering. In addition, patients should be monitored following the injection to permit early treatment should an infection occur. • Increases in Intraocular Pressure - Increases in intraocular pressure have been noted both pre-injection and post-injection (at 60 minutes) while being treated. Monitor intraocular pressure prior to and following intravitreal injection and manage appropriately. • Thromboembolic Events - Although there was a low rate of arterial thromboembolic events (ATEs) observed in the clinical trials, there is a potential risk of ATEs following intravitreal use of VEGF inhibitors. Arterial thromboembolic events are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). <p>Fatal Events in Patients with Diabetic Macular Edema and Diabetic Retinopathy at Baseline - Fatal events occurred more frequently in patients with DME and DR at baseline, who were treated monthly with ranibizumab as compared with control. Although the rate of fatal events was low and included causes of death typical of patients with advanced diabetic complications, a potential relationship between these events and intravitreal use of VEGF inhibitors cannot be excluded.</p>
<p>Ranibizumab for Ocular Implant (Susvimo)</p>	<p>Boxed Warning:</p> <p>WARNING: ENDOPHTHALMITIS</p> <ul style="list-style-type: none"> • The Susvimo 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 erosions may reduce the risk of endophthalmitis. In clinical trials, 2% of patients receiving a

ranibizumab implant experienced at least one episode of endophthalmitis.

Contraindications

- Ocular or periocular infection
- Hypersensitivity to ranibizumab products or any of the excipients in Susvimo
- Active intraocular inflammation

Precautions/Warnings

- **Endophthalmitis** – see boxed warning
- **Rhegmatogenous Retinal Detachment** - Rhegmatogenous retinal detachments have occurred in clinical trials and may result in vision loss. Rhegmatogenous retinal detachments should be promptly treated with an intervention (e.g., pneumatic retinopexy, vitrectomy, or laser photocoagulation). Refill-exchanges should be delayed in the presence of a retinal detachment or retinal break. Careful evaluation of the retinal periphery is recommended to be performed, and any suspected areas of abnormal vitreo-retinal adhesion or retinal breaks should be treated before inserting the implant in the eye.
- **Implant Dislocation** - In clinical trials, the device has dislocated/subluxated into the vitreous cavity or has extended outside the vitreous cavity into or beyond the subconjunctival space. Device dislocation requires urgent surgical intervention. Strict adherence to the scleral incision length and appropriate targeting of the pars plana during laser ablation may reduce the risk of implant dislocation.
- **Vitreous Hemorrhage** - Vitreous hemorrhages may result in temporary vision loss. Vitrectomy may be needed in the case of a non-clearing vitreous hemorrhage. In clinical trials, including extension phases, vitreous hemorrhages were reported in 5.2% (23/443) of patients. The majority of these hemorrhages occurred within the first post-operative month following surgical implantation and the majority of vitreous hemorrhages resolved spontaneously. Patients on antithrombotic medication (e.g., oral anticoagulants, aspirin, nonsteroidal anti-inflammatory drugs) may be at increased risk of vitreous hemorrhage. Antithrombotic medications are recommended to be temporarily interrupted prior to the implant insertion procedure. Refill-exchanges should be delayed in the event of sight-threatening vitreous hemorrhage. The use of pars plana laser ablation and scleral cauterization should be performed to reduce the risk of vitreous hemorrhage.
- **Conjunctival Erosion or Retraction** - Conjunctival erosion is a full thickness degradation or breakdown of the conjunctiva in the area of the implant flange. A conjunctival retraction is a recession or opening

of the limbal and/or radial peritomy. Conjunctival erosions or retractions have been associated with an increased risk of endophthalmitis, especially if the implant becomes exposed. Surgical intervention (e.g., conjunctival/Tenon's capsule repair) is recommended to be performed in case of conjunctival erosion or retraction with or without exposure of the implant flange. In clinical trials, including extension phases, 3.6% (16/443) of patients reported conjunctival erosion and 1.6% (7/443) of patients reported conjunctival retraction in the study eye. Appropriate intraoperative handling of conjunctiva and Tenon's capsule to preserve tissue integrity and secure closure of peritomy while ensuring placement of sutures away from implant edge may reduce the risk of conjunctival erosion or retraction. The implant and the tissue overlying the implant flange should be monitored routinely following the implant insertion.

- **Conjunctival Bleb** - A conjunctival bleb is an encapsulated elevation of the conjunctiva above the implant flange, which may be secondary to subconjunctival thickening or fluid. Conjunctival blebs may require surgical management to avoid further complications, especially if the implant septum is no longer identifiable due to the conjunctival bleb. In clinical trials, including extension phases, 5.9% (26/443) of patients reported conjunctival bleb/conjunctival filtering bleb leak in the study eye. Strict adherence to the scleral incision length, appropriate intraoperative handling of conjunctiva and Tenon's capsule to preserve tissue integrity and secure closure of peritomy, and proper seating of the refill needle during refill-exchange procedures may reduce the risk of conjunctival bleb.
- **Postoperative Decrease in Visual Acuity** - Visual acuity was decreased by 4 letters on average in the first postoperative month and 2 letters on average in the second postoperative month following initial implantation.
- **Air Bubbles Causing Improper Filling of the Implant** - Minimize air bubbles within the implant reservoir as they may cause slower drug release. During the initial fill procedure, if an air bubble is present, it must be no larger than 1/3 of the widest diameter of the implant. If excess air is observed after initial fill, do not use the implant. During the refill-exchange procedure, if excess air is present in the syringe and needle do not use the syringe and needle. If excess air bubbles are observed after the refill-exchange procedure, consider repeating the refill-exchange procedure.
- **Deflection of the Implant** - Use caution when performing ophthalmic procedures that may cause deflection of the implant and subsequent injury. For example, B-scan ophthalmic ultrasound, scleral depression, or gonioscopy.
- **Septum Implant Dislodgement** – A type of implant damage where the septum has dislodged into the implant body has been reported.

	<p>Perform a dilated slit lamp exam and/or dilated indirect ophthalmoscopy to inspect the implant in the vitreous cavity through the pupil prior to and after the refill-exchange procedure to identify if septum dislodgement has occurred. Appropriate handling and insertion of the refill needle into the septum (avoid twisting and/or rotation) is required to minimize the risk of septum dislodgement. Discontinue treatment with ranibizumab (Susvimo) following septum dislodgement and consider implant removal should the benefit of the removal procedure outweigh the risk.</p>
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BILLING/CODING INFORMATION:

The following codes may be used to describe:

HCPCS Coding

J0177	Injection, aflibercept hd, 1 mg
J0178	Injection, aflibercept, 1 mg
J0179	Injection, brolocizumab-dbl, 1 mg
J2503	Injection, pegaptanib sodium, 0.3 mg
J2777	Injection, faricimab-svoa, 0.1 mg
J2778	Injection, ranibizumab, 0.1 mg
J2779	Injection, ranibizumab, via intravitreal implant (Susvimo), 0.1 mg
Q5124	Injection, ranibizumab-nuna, biosimilar, (Byooviz), 0.1 mg
Q5128	Injection, ranibizumab-eqrn (Cimerli), biosimilar, 0.1 mg

NOTE: The use of bevacizumab and bevacizumab biosimilars for non-FDA labeled ophthalmic indications should be reported using the unclassified HCPCS code J3490 or, for Outpatient Hospital ONLY, either J3490 or C9257. Do **NOT** use HCPCS code J9035 [injection, bevacizumab, 10 mg], Q5107 [injection, bevacizumab-awwb, biosimilar, (mvasi), 10 mg], or Q5118 [injection, bevacizumab-bvzr, biosimilar, (Zirabev), 10 mg] since the agent has been processed by a pharmacist.

ICD-10 Diagnosis Codes That Support Medical Necessity for Bevacizumab (Avastin) and Bevacizumab Biosimilars [bevacizumab-awwb (Mvasi) and bevacizumab-awwb (Zirabev)] (all J3490):

B39.4	Histoplasmosis capsulati, unspecified
B39.5	Histoplasmosis duboisii
B39.9	Histoplasmosis, unspecified
E08.311 – E08.319	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3291 – E08.3299	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema

E08.3391 – E08.3399	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3491 – E08.3499	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema
E08.3511 – E08.3599	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy
E09.311 – E09.319	Drug or chemical induced diabetes with unspecified diabetic retinopathy
E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3291 – E09.3299	Drug or chemical induced diabetes with mild nonproliferative diabetic retinopathy without macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3391 – E09.3399	Drug or chemical induced diabetes with moderate nonproliferative diabetic retinopathy without macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3491 – E09.3499	Drug or chemical induced diabetes condition with severe nonproliferative diabetic retinopathy without macular edema
E09.3511 – E09.3599	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy
E10.311 – E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3291 – E10.3299	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3391 – E10.3399	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3491 – E10.3499	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E10.3511 – E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy
E11.311 – E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3291 – E11.3299	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema

E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3391 – E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3491 – E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E11.3511 – E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy
E13.311 – E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3291 – E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3391 – E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3491 – E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E13.3511 – E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy
H32	Chorioretinal disorders in diseases classified elsewhere
H34.8110	Central retinal vein occlusion, right eye, with macular edema
H34.8111	Central retinal vein occlusion, right eye, with retinal neovascularization
H34.8120	Central retinal vein occlusion, left eye, with macular edema
H34.8121	Central retinal vein occlusion, left eye, with retinal neovascularization
H34.8130	Central retinal vein occlusion, bilateral, with macular edema
H34.8131	Central retinal vein occlusion, bilateral, with retinal neovascularization
H34.8190	Central retinal vein occlusion, unspecified eye, with macular edema
H34.8191	Central retinal vein occlusion, unspecified eye, with retinal neovascularization
H34.821	Venous engorgement, right eye
H34.822	Venous engorgement, left eye
H34.823	Venous engorgement, bilateral
H34.829	Venous engorgement, unspecified eye
H34.8310	Tributary (branch) retinal vein occlusion, right eye, with macular edema
H34.8311	Tributary (branch) retinal vein occlusion, right eye, with retinal neovascularization
H34.8320	Tributary (branch) retinal vein occlusion, left eye, with macular edema
H34.8321	Tributary (branch) retinal vein occlusion, left eye, with retinal neovascularization

H34.8330	Tributary (branch) retinal vein occlusion, bilateral, with macular edema
H34.8331	Tributary (branch) retinal vein occlusion, bilateral, with retinal neovascularization
H34.8390	Tributary (branch) retinal vein occlusion, unspecified eye, with macular edema
H34.8391	Tributary (branch) retinal vein occlusion, unspecified eye, with retinal neovascularization
H35.00 - H35.019	Background retinopathy and retinal vascular changes [for radiation retinopathy ONLY]
H35.051	Retinal neovascularization, unspecified, right eye
H35.052	Retinal neovascularization, unspecified, left eye
H35.053	Retinal neovascularization, unspecified, bilateral
H35.059	Retinal neovascularization, unspecified, unspecified eye
H35.101 – H35.179	Retinopathy of prematurity
H35.3210 – H35.3293	Exudative age-related macular degeneration
H35.33	Angioid streaks of macula
H35.351 – H35.359	Cystoid macular degeneration
H35.81	Retinal edema
H40.51X1 – H40.51X4	Glaucoma secondary to other eye disorders, right eye
H40.52X1 – H40.52X4	Glaucoma secondary to other eye disorders, left eye
H40.53X1 – H40.53X4	Glaucoma secondary to other eye disorders, bilateral
H40.60X1 – H40.60X4	Glaucoma secondary to drugs, unspecified eye
H40.89	Other specified glaucoma
H44.2A1	Degenerative myopia with choroidal neovascularization, right eye
H44.2A2	Degenerative myopia with choroidal neovascularization, left eye
H44.2A3	Degenerative myopia with choroidal neovascularization, bilateral
H44.2A9	Degenerative myopia with choroidal neovascularization, unspecified eye
T66.XXXA – T66.XXXS	Radiation sickness, unspecified [for radiation retinopathy ONLY]

ICD-10 Diagnosis Codes That Support Medical Necessity for Brolicizumab (Beovu) (J0179):

E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3511 – E08.3519	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema

E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3511 – E09.3519	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3511 – E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema
H35.3210 – H35.3293	Exudative age-related macular degeneration

ICD-10 Diagnosis Codes That Support Medical Necessity for Faricimab (Vabysmo) (J2777):

E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3511 – E08.3519	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema
E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3511 – E09.3519	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema

E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3511 – E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema
H34.8110	Central retinal vein occlusion, right eye, with macular edema
H34.8120	Central retinal vein occlusion, left eye, with macular edema
H34.8130	Central retinal vein occlusion, bilateral, with macular edema
H34.8190	Central retinal vein occlusion, unspecified eye, with macular edema
H34.8310	Tributary (branch) retinal vein occlusion, right eye, with macular edema
H34.8320	Tributary (branch) retinal vein occlusion, left eye, with macular edema
H34.8330	Tributary (branch) retinal vein occlusion, bilateral, with macular edema
H34.8390	Tributary (branch) retinal vein occlusion, unspecified eye, with macular edema
H35.3210 – H35.3293	Exudative age-related macular degeneration

ICD-10 Diagnosis Codes That Support Medical Necessity for Ranibizumab for Ocular Implant (Susvimo) (J2779):

H35.3210 – H35.3293	Exudative age-related macular degeneration
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ICD-10 Diagnosis Codes That Support Medical Necessity for Ranibizumab (Lucentis) (J2778), Ranibizumab-nuna (Byooviz) (Q5124), and Ranibizumab-eqrn (Cimerli) (Q5128):

B39.4	Histoplasmosis capsulati, unspecified
B39.5	Histoplasmosis duboisii
B39.9	Histoplasmosis, unspecified
E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3511 – E08.3599	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema

E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3511 – E09.3599	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3511 – E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy
H34.8110	Central retinal vein occlusion, right eye, with macular edema
H34.8120	Central retinal vein occlusion, left eye, with macular edema
H34.8130	Central retinal vein occlusion, bilateral, with macular edema
H34.8190	Central retinal vein occlusion, unspecified eye, with macular edema
H34.8310	Tributary (branch) retinal vein occlusion, right eye, with macular edema
H34.8320	Tributary (branch) retinal vein occlusion, left eye, with macular edema
H34.8330	Tributary (branch) retinal vein occlusion, bilateral, with macular edema

H34.8390	Tributary (branch) retinal vein occlusion, unspecified eye, with macular edema
H35.101 – H35.179	Retinopathy of prematurity
H35.3210 – H35.3293	Exudative age-related macular degeneration
H35.33	Angioid streaks of macula
H44.2A1	Degenerative myopia with choroidal neovascularization, right eye
H44.2A2	Degenerative myopia with choroidal neovascularization, left eye
H44.2A3	Degenerative myopia with choroidal neovascularization, bilateral
H44.2A9	Degenerative myopia with choroidal neovascularization, unspecified eye

ICD-10 Diagnosis Codes That Support Medical Necessity for Aflibercept (Eylea) (J0178):

E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3391 – E08.3399	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3491 – E08.3499	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema
E08.3511 – E08.3599	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema
E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3391 – E09.3399	Drug or chemical induced diabetes with moderate nonproliferative diabetic retinopathy without macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3491 – E09.3499	Drug or chemical induced diabetes condition with severe nonproliferative diabetic retinopathy without macular edema
E09.3511 – E09.3599	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema

E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3391 – E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3391 – E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3599,	Type 2 diabetes mellitus with proliferative diabetic retinopathy
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3391 – E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3491 – E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E13.3511 – E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy
H34.8110	Central retinal vein occlusion, right eye, with macular edema
H34.8120	Central retinal vein occlusion, left eye, with macular edema
H34.8130	Central retinal vein occlusion, bilateral, with macular edema
H34.8190	Central retinal vein occlusion, unspecified eye, with macular edema
H34.8310	Tributary (branch) retinal vein occlusion, right eye, with macular edema
H34.8320	Tributary (branch) retinal vein occlusion, left eye, with macular edema
H34.8330	Tributary (branch) retinal vein occlusion, bilateral, with macular edema
H34.8390	Tributary (branch) retinal vein occlusion, unspecified eye, with macular edema
H35.101 – H35.179	Retinopathy of prematurity

H35.3210 – H35.3293	Exudative age-related macular degeneration
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ICD-10 Diagnosis Codes That Support Medical Necessity for Aflibercept (Eylea HD) (J0177):

E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3391 – E08.3399	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3491 – E08.3499	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema
E08.3511 – E08.3599	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema
E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3391 – E09.3399	Drug or chemical induced diabetes with moderate nonproliferative diabetic retinopathy without macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3491 – E09.3499	Drug or chemical induced diabetes condition with severe nonproliferative diabetic retinopathy without macular edema
E09.3511 – E09.3599	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3391 – E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy

E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3391 – E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3599,	Type 2 diabetes mellitus with proliferative diabetic retinopathy
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3391 – E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3491 – E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
E13.3511 – E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy
H35.3210 – H35.3293	Exudative age-related macular degeneration

ICD-10 Diagnosis Codes That Support Medical Necessity for Pegaptanib (Macugen) (J2503):

E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
E08.3211 – E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
E08.3311 – E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
E08.3411 – E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
E08.3511 – E08.3519	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema
E09.3211 – E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema

E09.3311 – E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E09.3411 – E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E09.3511 – E09.3519	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E10.3211 – E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E10.3311 – E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E10.3411 – E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E10.3511 – E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
E11.3211 – E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E11.3311 – E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E11.3411 – E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E11.3511 – E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
E13.3211 – E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
E13.3311 – E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
E13.3411 – E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
E13.3511 – E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema
H35.3210 – H35.3293	Exudative age-related macular degeneration

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Part D: Florida Blue has delegated to Prime Therapeutics authority to make coverage determinations for the Medicare Part D services referenced in this guideline.

Medicare Advantage: Medical necessity is determined using any applicable NCD or LCD and then Step Therapy Requirements for Medicare Outpatient (Part B) Medications outlined in Policy (09-J3000-39).

DEFINITIONS:

Macular edema - swelling of the retina due to leaking of fluid from blood vessels within the macula (the central portion of the retina). Diabetic macular edema (DME) is macular edema that occurs in patients with diabetes.

Retinal vein occlusion - a blockage of one or more veins that carry blood away from the retina. Central retinal vein occlusion (CRVO) occurs when the blockage is in the main vein in the retina. Branch retinal vein occlusion (BRVO) occurs when the blockage is one of the smaller veins attached to the main vein in the retina

RELATED GUIDELINES:

None.

OTHER:

Early Treatment Diabetic Retinopathy Study (ETDRS) Diabetic Retinopathy Severity Scale

DRSS Level/severity	Definition
10 No retinopathy	<ul style="list-style-type: none">Diabetic retinopathy absent
20 Very mild NPDR	<ul style="list-style-type: none">Microaneurysms only
35 Mild NPDR	<ul style="list-style-type: none">Hard exudates, cotton-wool spots, and/or mild retinal hemorrhages
47 Moderate NPDR	<ul style="list-style-type: none">Retinal hemorrhages: moderate in 4 quadrants or severe in 1 quadrantMild intraretinal microvascular abnormalities in 4 quadrants
53 Severe NPDR	<ul style="list-style-type: none">≥2 level 47 characteristicsSevere retinal hemorrhages in 4 quadrantsModerate to severe intraretinal microvascular abnormalities in ≥1 quadrantVenous beading (or loops) in at least 2 quadrants
61 Mild PDR	<ul style="list-style-type: none">New vessels <0.5 disc area in ≥1 quadrant

65 Moderate PDR	<ul style="list-style-type: none"> • New vessels ≥ 1 disc diameters of the optic disc in ≥ 1 quadrant < 0.25-0.33 disc area • New vessels elsewhere in ≥ 0.5 disc area in ≥ 1 quadrant
71, 75 High-risk PDR	<ul style="list-style-type: none"> • New vessel ≥ 1 disc diameter of the optic disc ≥ 0.5 disc area plus preretinal hemorrhage or vitreous hemorrhage, or preretinal hemorrhage or vitreous hemorrhage obscuring ≥ 1 disc area
81, 85 Advanced PDR	<ul style="list-style-type: none"> • Fundus partially obscured by vitreous hemorrhage and either new vessels ungradable or retina detached at the center of the macula

DRSS = diabetic retinopathy severity score; NPDR = non-proliferative diabetic retinopathy; PDR = proliferative diabetic retinopathy

REFERENCES:

1. American Diabetes Association: Standards of medical care in diabetes - 2019. *Diabetes Care* 2019; 42(Suppl 1): S1-S193.
2. Beovu (brolucizumab) injection [package insert]. Novartis Pharmaceuticals Corporation. East Hanover, NJ: December 2022.
3. Bhisitkul RB, Mendes TS, Rofagha S, et al. Macular atrophy progression and 7-year vision outcomes in subjects from the ANCHOR, MARINA, and HORIZON studies: the SEVEN-UP study. *Am J Ophthalmol.* 2015;159(5):915.
4. Braithwaite T, Nanji AA, Greenberg PB. Anti-vascular endothelial growth factor for macular edema secondary to central retinal vein occlusion. *Cochrane Database of Systematic Reviews* 2010, Issue 10. Art. No.: CD007325. DOI: 10.1002/14651858.CD007325.pub2.
5. Byooviz (ranibizumab-nuna injection, for intravitreal use) [package insert]. Biogen Inc. Cambridge MA: June 2023.
6. Chakravarthy U, Harding SP, Rogers CA, et al. on behalf of the IVAN study investigators. Alternative treatments to inhibit VEGF in age-related choroidal neovascularization: 2-year findings of the IVAN randomized controlled trial. *Lancet.* 2013;382(9900):1258.
7. Cimerli (ranibizumab-eqrn injection, for intravitreal use) [package insert]. Coherus BioSciences, Inc. Redwood City, CA: November 2022.
8. Cionni DA, Lewis SA, Peterson MR, et al. Analysis of Outcomes for Intravitreal Bevacizumab in the Treatment of Choroidal Neovascularization Secondary to Ocular Histoplasmosis. *Ophthalmology.* 2011 Nov 29.
9. Clinical Pharmacology powered by ClinicalKey [Internet]. Tampa, FL: Elsevier.; 2021. Available at: <https://www.clinicalkey.com/pharmacology/>. Accessed 8/30/23.
10. Clinical Trials.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). NCT03677934. Accessed 10/28/21 at: <https://clinicaltrials.gov/ct2/show/NCT03677934>.
11. Darlow BA, Ells AL, Gilbert CE, et al. Are we there yet? Bevacizumab therapy for retinopathy of prematurity. *Arch Dis Child Fetal Neonatal Ed.* 2013 Mar;98(2): F170-4.
12. Diabetic Retinopathy Clinical Research Network, Wells JA, Glassman AR, Ayala AR, et al. Aflibercept, bevacizumab, or ranibizumab for diabetic macular edema. *N Engl J Med.* 2015;372(13):1193.

13. DRUGDEX® System [Internet]. Greenwood Village (CO): Thomson Micromedex; Updated periodically [cited 2023 Aug 30].
14. Dugel PU, Koh A, Ogura Y, et al.; HAWK and HARRIER Study Investigators. HAWK and HARRIER: Phase 3, Multicenter, Randomized, Double-Masked Trials of Brolucizumab for Neovascular Age-Related Macular Degeneration. *Ophthalmology*. 2019 Apr 12. pii: S0161-6420(18)33018-5. [Epub ahead of print].
15. Ehlers JP, Spirm MJ, Lam A, et al: Combination intravitreal bevacizumab/panretinal photocoagulation versus panretinal photocoagulation alone in the treatment of neovascular glaucoma. *Retina* 2008; 28(5):696-702.
16. Ehrlich R, Ciulla TA, Maturi R, et al. Intravitreal Bevacizumab for Choroidal Neovascularization Secondary to Presumed Ocular Histoplasmosis Syndrome. *Retina*. 2009;29(10); 1418-1423.
17. El Matri L, Kort F, Bouraoui R, et al. Intravitreal Bevacizumab for the Treatment of Choroidal Neovascularization Secondary to Angioid Streaks: One Year Follow-Up. *Acta Ophthalmol*. 2011 Nov; 89(7):641-6.
18. Eylea (aflibercept) injection [package insert]. Regeneron Pharmaceuticals. Tarrytown, NY. February 2023.
19. Eylea HD (aflibercept) injection [package insert]. Regeneron Pharmaceuticals. Tarrytown, NY. August 2023.
20. Finger RP, Charbel Issa P, Schmitz-Valckenberg S, et al. Long-Term Effectiveness of Intravitreal Bevacizumab for Choroidal Neovascularization Secondary to Angioid Streaks in Pseudoxanthoma Elasticum. *Retina*. 2011 Jul-Aug;31(7):1268-78.
21. Flaxel CJ, Adelman RA, Bailey ST, et al. Age-Related Macular Degeneration Preferred Practice Pattern. *Ophthalmology*. 2020 Jan;127(1): P1-P65. Epub 2019 Sep 25.
22. Flaxel CJ, Adelman RA, Bailey ST, et al. Diabetic Retinopathy Preferred Practice Pattern. *Ophthalmology*. 2020 Jan;127(1): P66-P145. Epub 2019 Sep 25.
23. Flaxel CJ, Adelman RA, Bailey ST, et al. Retinal Vein Occlusions Preferred Practice Pattern. *Ophthalmology*. 2020 Feb;127(2): P288-P320. Epub 2019 Sep 25.
24. Flaxel CJ, Adelman RA, Bailey ST, et al. Retinal and Ophthalmic Artery Occlusions Preferred Practice Pattern. *Ophthalmology*. 2020 Feb;127(2): P259-P287. Epub 2019 Sep 25.
25. Fleck BW. Management of retinopathy of prematurity. *Arch Dis Child Fetal Neonatal Ed*. 2013;98(5):F454.
26. Heier JS, Khanani AM, Quezada Ruiz C, et al; TENAYA and LUCERNE Investigators. Efficacy, durability, and safety of intravitreal faricimab up to every 16 weeks for neovascular age-related macular degeneration (TENAYA and LUCERNE): two randomised, double-masked, phase 3, non-inferiority trials. *Lancet*. 2022 Feb 19;399(10326):729-740. Epub 2022 Jan 24.
27. Kim M, Lee DH, Byeon SH, et al. Comparison of intravitreal bevacizumab and dexamethasone implant for the treatment of macula oedema associated with branch retinal vein occlusion. *Br J Ophthalmol*. 2015 Sep;99(9):1271-6.
28. Kumar A, Kumawat D, Sundar M, et al. Polypoidal choroidal vasculopathy: a comprehensive clinical update. *Ther Adv Ophthalmol*. 2019 Feb 27; 11:2515841419831152. eCollection 2019 Jan-Dec.
29. Lucentis (ranibizumab) injection [package insert]. Genentech. South San Francisco, CA. August 2023.
30. Macugen (pegaptanib sodium) injection [package insert]. Eyetech Inc. Palm Beach Gardens, FL. July 2016.

31. Mansour SE, Kiernan DF, Roth DB, et al. Two-year interim safety results of the 0.2 µg/day fluocinolone acetonide intravitreal implant for the treatment of diabetic macular oedema: the observational PALADIN study. *Br J Ophthalmol*. 2020 May 27.
32. Maturi RK, Glassman AR, Liu D, et al. Effect of Adding Dexamethasone to Continued Ranibizumab Treatment in Patients with Persistent Diabetic Macular Edema: A DRCR Network Phase 2 Randomized Clinical Trial. *JAMA Ophthalmol*. 2018;136(1):29-38.
33. Mehta H, Hennings C, Gillies MC, et al. Anti-vascular endothelial growth factor combined with intravitreal steroids for diabetic macular oedema. *Cochrane Database Syst Rev*. 2018 Apr 18;4:CD011599.
34. Mimoun G, Tilleul J, Leys A, et al. Intravitreal ranibizumab for choroidal neovascularization in angioid streaks. *Am J Ophthalmol*. 2010 Nov; 150(5):692-700.e1.
35. Mintz-Hittner HA, Kennedy KA, Chuang AZ, BEAT-ROP Cooperative Group. Efficacy of intravitreal bevacizumab for stage 3+ retinopathy of prematurity. *N Engl J Med* 2011; 364(7):603-615.
36. Mirshahi A, Roohipour R, Lashay A, et al. Bevacizumab-augmented retinal laser photocoagulation in proliferative diabetic retinopathy: a randomized double-masked clinical trial. *Eur J Ophthalmol*. 2008;18(2):263.
37. Moja L, Lucenteforte E, Kwag KH, et al. Systemic safety of bevacizumab versus ranibizumab for neovascular age-related macular degeneration. *Cochrane Database Syst Rev*. 2014;9:CD011230.
38. Myung JS, Bhatnagar P, Spaide RF, et al. Long-term outcomes of intravitreal anti-vascular endothelial growth factor therapy for the management of choroidal neovascularization in pseudoxanthoma elasticum. *Retina*. 2010 May; 30(5):748-55.
39. Nielsen JS, Fick TA, Saggau DD, Barnes CH. Intravitreal anti-vascular endothelial growth factor therapy for choroidal neovascularization secondary to ocular histoplasmosis syndrome. *Retina*. 2011 Jul 30.
40. Peiretti E, Caminiti G, Serra R, et al. Anti-VEGF versus Photodynamic therapy in the Treatment of Choroidal Neovascularization Secondary to Central Serous Chorioretinopathy. *Retina*. 2017 Jul 7.
41. Pham B, Thomas SM1 Lillie E, et al. Anti-vascular endothelial growth factor treatment for retinal conditions: a systematic review and meta-analysis. *BMJ Open*. 2019 May 28;9(5): e022031.
42. Rofagha S, Bhisitkul RB, Boyer DS, et al. Seven-year outcomes in ranibizumab-treated patients in ANCHOR, MARINA, and HORIZON: a multicenter cohort study (SEVEN-UP). *Ophthalmology*. 2013;120(11):2292.
43. Sahni J, Dugel PU, Patel SS, et al. Safety and Efficacy of Different Doses and Regimens of Faricimab vs Ranibizumab in Neovascular Age-Related Macular Degeneration: The AVENUE Phase 2 Randomized Clinical Trial. *JAMA Ophthalmol*. 2020 Sep 1;138(9):955-963.
44. Sankar MJ, Sankar J, Chandra P. Anti-vascular endothelial growth factor (VEGF) drugs for treatment of retinopathy of prematurity. *Cochrane Database Syst Rev*. 2018 Jan 8;1:CD009734.
45. Simha A, Aziz K, Braganza A, et al. Anti-vascular endothelial growth factor for neovascular glaucoma. *Cochrane Database Syst Rev*. 2020 Feb 6;2:CD007920.
46. Simunovic MP, Maberley DA. ANTI-VASCULAR ENDOTHELIAL GROWTH FACTOR THERAPY FOR PROLIFERATIVE DIABETIC RETINOPATHY: A Systematic Review and Meta-Analysis. *Retina*. 2015 Oct;35(10):1931-42.
47. Smith JM, Steel DHW. Anti-vascular endothelial growth factor for prevention of postoperative vitreous cavity haemorrhage after vitrectomy for proliferative diabetic retinopathy. *Cochrane Database of Systematic Reviews* 2011, Issue 5. Art. No.: CD008214. DOI: 10.1002/14651858.CD008214.pub2.
48. Solomon SD, Chew E, Duh EJ, et al. Diabetic retinopathy: a position statement by the American Diabetes Association. *Diabetic Care* 2017; 40:412-418.

49. Solomon SD, Lindsley K, Vedula SS, et al. Anti-vascular endothelial growth factor for neovascular age-related macular degeneration. *Cochrane Database Syst Rev*. *Cochrane Database Syst Rev*. 2018 Apr 18;4:CD011599.
50. Susvimo (ranibizumab injection for intravitreal use via ocular implant) [package insert]. Genentech. South San Francisco, CA. April 2022.
51. Susvimo (ranibizumab injection for intravitreal use via ocular implant) [recall letter]. Genentech. South San Francisco, CA. October 2022. Available at https://www.gene.com/download/pdf/Susvimo_DHCP_Important_Prescribing_Information_2022-10-18.pdf
52. Toussaint BW, Kitchens JW, Marcus DM, et al. Intravitreal aflibercept injection for choroidal neovascularization due to presumed ocular histoplasmosis syndrome: the HANDLE study. *Retina* 2017; 0:1-9.
53. Ushida H, Kachi S, Asami T, et al. Influence of preoperative intravitreal bevacizumab on visual function in eyes with proliferative diabetic retinopathy. *Ophthalmic Res*. 2013;49(1):30-6. Epub 2012 Sep 29.
54. Vabysmo (faricimab injection, solution) [package insert]. Genentech. South San Francisco, CA. October 2023.
55. Vader MJC, Schauwvlieghe AME, Verbraak FD, et al. Comparing the Efficacy of Bevacizumab and Ranibizumab in Patients with Retinal Vein Occlusion: The Bevacizumab to Ranibizumab in Retinal Vein Occlusions (BRVO) study, a Randomized Trial. *Ophthalmol Retina*. 2020 Jan 7. pii: S2468-6530(20)30001-4. [Epub ahead of print].
56. Vedula SS, Krzystolik M. Antiangiogenic therapy with anti-vascular endothelial growth factor modalities for neovascular age-related macular degeneration. *Cochrane Database of Systematic Reviews* 2008, Issue 2. Art. No.: CD005139. DOI: 10.1002/14651858.CD005139.pub2.
57. VEGF Inhibition Study in Ocular Neovascularization (V.I.S.I.O.N.) Clinical Trial Group1, Chakravarthy U, Adamis AP, Cunningham ET Jr, et al. Year 2 efficacy results of 2 randomized controlled clinical trials of pegaptanib for neovascular age-related macular degeneration. *Ophthalmology*. 2006 Sep;113(9): 1508.e1-25. Epub 2006 Jul 7.
58. Virgili G, Parravano M, Evans JR, et al: Anti-vascular endothelial growth factor for diabetic macular oedema: a network meta-analysis. *Cochrane Database Syst Rev* 2018; 2018(10):CD007419.
59. Wang E and Chen Y. Intravitreal anti-vascular endothelial growth factor for choroidal neovascularization secondary to pathologic myopia: systematic review and meta-analysis. *Retina* 2013; 33(7):1375-1392.
60. Writing Committee for the Diabetic Retinopathy Clinical Research Network, Gross JG, Glassman AR, Jampol LM, et al. Panretinal Photocoagulation vs Intravitreal Ranibizumab for Proliferative Diabetic Retinopathy: A Randomized Clinical Trial. *JAMA*. 2015 Nov 24;314(20):2137-46.
61. Wykoff CC, Abreu F, Adamis AP, et al. Efficacy, durability, and safety of intravitreal faricimab with extended dosing up to every 16 weeks in patients with diabetic macular oedema (YOSEMITE and RHINE): two randomized, double-masked, phase 3 trials. *Lancet*. 2022 Feb 19;399(10326):741-755. Epub 2022 Jan 24.
62. Yeh S, Kim SJ, Ho AC, et al. Therapies for macular edema associated with central retinal vein occlusion: a report by the American Academy of Ophthalmology. *Ophthalmology*. 2015 Apr;122(4):769-78. Epub 2015 Jan 8.
63. Zhang ZH, Liu HY, Hernandez-Da Mota SE, et al. Vitrectomy with or without preoperative intravitreal bevacizumab for proliferative diabetic retinopathy: a meta-analysis of randomized controlled trials. *Am J Ophthalmol*. 2013 Jul;156(1):106-115.e2.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Pharmacy Policy Committee on 12/13/23.

GUIDELINE UPDATE INFORMATION:

12/15/12	New Medical Coverage Guideline.
01/01/13	Annual HCPCS Update: added HCPCS code J0178 and removed code Q2046.
01/15/14	Review and revision to guideline; consisting of reformatting and revising the position statement, dosage, administration, precautions sections and updating the references.
10/15/14	Revision to guideline; consisting of position statement, dosing/administration.
01/15/15	Review and revision to guideline; consisting of updating references.
02/15/15	Revision to guideline; consisting of updating position statement and dosing/administration.
03/15/15	Revision to guideline; consisting of position statement.
06/15/15	Revision to guideline; consisting of position statement and updating references.
08/15/15	Revision to guideline; consisting of updating coding.
10/01/15	Revision consisting of update to Program Exceptions section.
11/01/15	Revision: ICD-9 Codes deleted.
01/15/16	Review and revision to guideline consisting of updates to position statement, coding/billing, and references.
08/15/16	Revision to guideline consisting of updating coding information.
10/01/16	Revision: ICD-10 code updates.
01/15/17	Review and revision to guideline consisting of position statement, coding/billing, and references.
06/15/17	Revision to guideline consisting of updates to the position statement, description section, dosage/administration, billing/coding, and references based on a new FDA-approved indication for ranibizumab (Lucentis).
05/15/18	Review and revision to guideline consisting of position statement, coding/billing, and references.
09/15/18	Revision to guideline consisting of updates to the coding/billing section.
05/15/19	Review and revision to guideline consisting of updating the dosage/administration and references.
07/15/19	Revision to guideline consisting of updates to the position statement, description section, dosage/administration, billing/coding, and references based on a new FDA-approved indication for aflibercept (Eylea). Update to Program Exceptions.
10/15/19	Revision to guideline consisting of updates to the position statement and coding/billing section.
12/15/19	Revision to guideline consisting of updates to the description, position statement, dosage/administration, billing/coding, and references based on new FDA-approval of brolocizumab (Beovu) and the inclusion of bevacizumab biosimilars.
01/01/20	Revision: HCPCS code updates. Added J0179 and deleted J3590.
05/15/19	Review and revision to guideline consisting of updating the description, position statement, billing/coding, and references.

09/15/20	Revision to guideline consisting of updating the position statement and references.
10/15/21	Review and revision to guideline consisting of updating the position statement, warnings/precautions, and references.
12/15/21	Revision to guideline consisting of updating the position statement, warnings/precautions, and references based on the FDA approval of Susvimo.
04/01/22	Revision: Added HCPCS code C9093.
06/15/22	Revision to guideline consisting of updating the description, position statement, dosing/administration, warnings/precautions, billing/coding, and references based on the FDA approvals of Byooviz and Vabysmo.
07/01/22	Revision: Added HCPCS codes C9097 and J2779 and deleted code C9093.
08/15/22	Revision to guideline consisting of updates to the description section, position statement, dosage/administration, billing/coding, and references based on a new FDA-approved indication for brolocizumab (Beovu).
10/01/22	Revision: Added HCPCS code J2777 and deleted codes C9097 and J3590.
11/15/22	Revision to guideline consisting of updating the description, position statement, dosing/administration, warnings/precautions, billing/coding, and references based on the FDA approval of Cimerli.
12/15/22	Review and revision to guideline consisting of updating the description, position statement, dosing/administration, warnings/precautions, billing/coding, and references based on Genentech's voluntary recall of the Susvimo implant.
04/01/23	Revision: Added HCPCS code Q5128 and deleted code J3590.
10/15/23	Review and revision to guideline consisting of updating the billing/coding and references.
1/15/24	Revision to guideline consisting of updating the description, position statement, dosing/administration, warnings/precautions, billing/coding, and references based on the FDA approval of Eylea HD and the new indication for faricimab (Vabysmo) for the treatment of macular edema following retinal vein occlusion (RVO).
04/01/24	Revision: Added HCPCS code J0177 and deleted codes C9161 and J3590.