

CLINICAL POLICY

Bevacizumab and Biosimilars

Clinical Policy: Bevacizumab (Alymsys, Avastin, Avzivi, Jobevne, Mvasi, Vegzelma, Zirabev)

Reference Number: PA.CP.PHAR.93

Effective Date: 01/2018

Last Review Date: 10/2025

Description

Bevacizumab (Avastin[®]), and its biosimilars [bevacizumab-maly (Alymsys[®]), bevacizumab-tjnj (Avzivi[®]), bevacizumab-nwgd (Jobevne[™]), bevacizumab-awwb (Mvasi[®]), bevacizumab-adcd (Vegzelma[™]), bevacizumab-bvzr (Zirabev[™])] are vascular endothelial growth factor-specific angiogenesis inhibitors.

FDA Approved Indication(s)

Avastin, Alymsys, Avzivi, Jobevne, Mvasi, Vegzelma and Zirabev, are indicated for the treatment of:

- Metastatic colorectal cancer, in combination with intravenous 5-fluorouracil (5-FU)-based chemotherapy for first- or second-line treatment
- Metastatic colorectal cancer, in combination with fluoropyrimidine-irinotecan- or fluoropyrimidine-oxaliplatin-based chemotherapy for second-line treatment in patients who have progressed on a first-line bevacizumab product-containing regimen
- Unresectable, locally advanced, recurrent, or metastatic non-squamous non-small cell lung cancer (NSCLC), in combination with carboplatin and paclitaxel for first-line treatment
- Recurrent glioblastoma in adults
- Metastatic renal cell carcinoma (RCC) in combination with interferon alfa
- Persistent, recurrent, or metastatic cervical cancer, in combination with paclitaxel and cisplatin, or paclitaxel and topotecan.
- Epithelial ovarian, fallopian tube, or primary peritoneal cancer:
 - In combination with carboplatin and paclitaxel, followed by Avastin/ Jobevne/Mvasi/ Vegzelma /Zirabev as a single agent, for stage III or IV disease following initial surgical resection
 - In combination with paclitaxel, pegylated liposomal doxorubicin, or topotecan for platinum-resistant recurrent disease who received no more than 2 prior chemotherapy regimens
 - In combination with carboplatin and paclitaxel or carboplatin and gemcitabine, followed by Avastin/ Jobevne/Mvasi/Vegzelma/Zirabev as a single agent, for platinum-sensitive recurrent disease

Avastin is also indicated for the treatment of:

- Hepatocellular carcinoma (HCC) in combination with atezolizumab for patients with unresectable or metastatic HCC who have not yet received prior systemic therapy.

Limitation(s) of use: Bevacizumab-products are not indicated for adjuvant treatment of colon cancer.

Policy/Criteria

It is the policy of PA Health & Wellness that Avastin, Alymsys, Avzivi, Jobevne, Mvasi, Vegzelma, and Zirabev are **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. FDA Approved Indications (must meet all):

1. Diagnosis of one of the following (a-g):
 - a. Colorectal cancer:
 - b. Non-squamous non-small cell lung cancer:
 - c. Glioblastoma;
 - d. Renal cell carcinoma:
 - e. Cervical cancer:
 - f. Epithelial ovarian, fallopian tube, or primary peritoneal cancer;
 - g. Hepatocellular carcinoma
2. Prescribed by or in consultation with an oncologist;
3. Age \geq 18 years;
4. Member meets one of the following (a-h):
 - a. For colorectal cancer, both of the following (i and ii):
 - i. Disease is advanced, metastatic, or unresectable;
 - ii. Prescribed in combination with one of the following (1-6):
 - 1) 5-FU/leucovorin or capecitabine-based chemotherapy;
 - 2) IROX (irinotecan and oxaliplatin);
 - 3) FOLFOX (fluorouracil, leucovorin, and oxaliplatin) or CapeOX (capecitabine and oxaliplatin);
 - 4) Irinotecan or FOLFIRI (fluorouracil, leucovorin, and irinotecan);
 - 5) FOLFIRINOX (fluorouracil, leucovorin, irinotecan, and oxaliplatin);
 - 6) Lonsurf[®] if previously progressed through all available regimens;
 - b. For non-squamous NSCLC, both of the following (i and ii):
 - i. Disease is unresectable, recurrent, advanced, or metastatic;
 - ii. Prescribed as one of the following (1-5):
 - 1) Single agent therapy;
 - 2) In combination with carboplatin and paclitaxel;
 - 3) In combination with pemetrexed with or without carboplatin or cisplatin;
 - 4) In combination with Tecentriq[®] with or without carboplatin and paclitaxel;
 - 5) In combination with erlotinib for sensitizing EGFR mutation-positive histology (i.e., EGFR exon 19 deletion or exon 21 L858R);
 - c. For glioblastoma, patient has recurrent disease or requires symptom management;
 - d. For renal cell carcinoma, both of the following (i and ii):
 - i. Disease is relapsed or metastatic;
 - ii. Prescribed in one of the following ways (1, 2, or 3):
 - 1) As a single agent;
 - 2) In combination with everolimus;
 - 3) For advanced papillary RCC, including hereditary leiomyomatosis and renal cell carcinoma-associated RCC, only: In combination with erlotinib;
 - e. For cervical cancer, both of the following (i and ii):

- i. Disease is persistent, recurrent, or metastatic;
 - ii. Prescribed in one of the following ways (1, 2 or 3)
 - 1) As a single agent;
 - 2) In combination with paclitaxel/cisplatin with or without Tecentriq, paclitaxel/carboplatin with or without Tecentriq, or paclitaxel/topotecan;
 - 3) In combination with Keytruda[®], paclitaxel, and cisplatin/carboplatin for PD-L1-positive disease;
 - f. For epithelial ovarian, fallopian tube, or primary peritoneal cancer, prescribed in one of the following ways (i-v):
 - i. As a single agent;
 - ii. In combination with a platinum agent (e.g., carboplatin, oxaplatin) and chemotherapy (e.g., docetaxel, paclitaxel);
 - iii. For maintenance in combination with Lynparza[®] (or Zejula[®] if unable to tolerate Lynparza) for stage II-IV disease;
 - iv. For platinum-resistant persistent disease or recurrence, one of the following (1-5):
 - 1) In combination with paclitaxel, liposomal doxorubicin, topotecan, gemcitabine, or cyclophosphamide;
 - 2) In combination with carboplatin and paclitaxel, or carboplatin and gemcitabine, or carboplatin and liposomal doxorubicin;
 - 3) In combination with cyclophosphamide and Keytruda;
 - 4) In combination with Ixempra[®] (if previously treated with a taxane);
 - 5) In combination with Elahere[™] (in folate receptor-alpha expressing tumors);
 - v. For platinum-sensitive persistent disease or recurrence, one of the following (1, 2, or 3):
 - 1) In combination with carboplatin and paclitaxel, or carboplatin and gemcitabine, or carboplatin and liposomal doxorubicin;
 - 2) In combination with Zejula as target therapy;
 - 3) In combination with Elahere in folate receptor-alpha expressing tumors;
 - g. For HCC, prescribed in combination with Tecentriq[®] as one of the following (i or ii):
 - i. First-line systemic therapy, and:
 - 1) Disease is unresectable or metastatic;
 - ii. Subsequent-line systemic therapy if progression on or after systemic therapy;
 - h. Other NCCN recommendations listed as category 1, 2A, or 2B;
5. For Alymsys, Avastin, Avzivi, Jobevne, or Vegzelma requests, member meets one of the following (a or b):
- a. Member must use Mvasi or Zirabev, unless both are contraindicated or clinically significant adverse effects are experienced;*
- *Prior authorization may be required for Mvasi and Zirabev*
- b. Request is for Stage IV or metastatic cancer;
6. Request meets one of the following (a or b):

- a. Dose does not exceed 15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks (*see Appendix E for dose rounding guidelines*);
- b. Dose is supported by practice guidelines or peer-reviewed literature for the relevant off-label use (*prescriber must submit supporting evidence*).

Approval duration: 12 months

B. Oncology - Non-FDA Approved Adult Indications (off-label) (must meet all):

1. Diagnosis of one of the following conditions (a-p):
 - a. Glioma of one of the following types (i-vii):
 - i. Oligodendroglioma that is IDH-mutant, 1p19q codeleted;
 - ii. IDH-mutant astrocytoma;
 - iii. Circumscribed glioma;
 - iv. Pleomorphic xanthroastrocytoma;
 - v. Gliosarcoma;
 - vi. H3-mutated high-grade glioma;
 - vii. High-grade astrocytoma with piloid features;
 - b. Ampullary adenocarcinoma – intestinal type;
 - c. Endometrial carcinoma;
 - d. Intracranial and spinal ependymoma;
 - e. Peritoneal mesothelioma;
 - f. Pleural mesothelioma;
 - g. Medulloblastoma;
 - h. Meningioma;
 - i. Metastatic spine tumors or brain metastases;
 - j. Primary central nervous system lymphoma;
 - k. Primary spinal cord tumors;
 - l. Small bowel adenocarcinoma;
 - m. Soft tissue sarcoma – solitary fibrous tumor or angiosarcoma;
 - n. Vulvar cancer – squamous cell carcinoma;
 - o. Neurofibromatosis type 2 vestibular schwannomas with hearing loss;
 - p. Vaginal cancer;
 - q. Other NCCN category I, 2A, and 2B recommendations;
2. Prescribed by or in consultation with an oncologist;
3. Age \geq 18 years;
4. For Alymsys, Avastin, Avzivi, Jobevne, or Vegzelma requests, member meets one of the following (a or b):
 - a. Member must use Mvasi or Zirabev, unless both are contraindicated or clinically significant adverse effects are experienced;*
**Prior authorization may be required for Mvasi and Zirabev*
 - b. Request is for Stage IV or metastatic cancer;
5. For ampullary adenocarcinoma, peritoneal mesothelioma, pleural mesothelioma, small bowel adenocarcinoma, or vulvar cancer: Prescribed as part of combination therapy;
6. For neurofibromatosis type 2 vestibular schwannomas with hearing loss: Prescribed as a single agent;

7. Dose is within FDA maximum limit for any FDA-approved indication or is supported by practice guidelines or peer-reviewed literature for the relevant off-label use (*prescriber must submit supporting evidence*).

Approval duration: 12 months

C. Oncology - Non-FDA-Approved Pediatric Indications (off-label) (must meet all):

1. Diagnosis of one of the following (a-c):
 - a. Diffuse high-grade glioma;
 - b. Medulloblastoma;
 - c. Other NCCN recommendations listed as category 1, 2A, or 2B;
2. Prescribed by or in consultation with an oncologist;
3. Age < 18 years;
4. For Alymsys, Avastin, Avzivi, Jobevne, or Vegzelma requests, member meets one of the following (a or b):
 - a. Member must use Mvasi or Zirabev, unless both are contraindicated or clinically significant adverse effects are experienced;*
**Prior authorization may be required for Mvasi and Zirabev*
 - b. Request is for Stage IV or metastatic cancer;
5. Dose is within FDA maximum limit for any FDA-approved indication or is supported by practice guidelines or peer-reviewed literature for the relevant off-label use (*prescriber must submit supporting evidence*).

Approval duration: 12 months

D. Ophthalmology - Non-FDA Approved Indications (off-label) (must meet all):

1. Diagnosis of one of the following conditions (a-i):
 - a. Neovascular (wet) age-related macular degeneration (nAMD);
 - b. Macular edema following retinal vein occlusion (RVO);
 - c. Diabetic macular edema (DME);
 - d. Diabetic retinopathy (DR);
 - e. Neovascular glaucoma;
 - f. Choroidal neovascularization (including but not limited to choroidal neovascularization associated with: angioid streaks, no known cause, inflammatory conditions, high pathologic myopia, or ocular histoplasmosis syndrome, trauma, retinal dystrophies, rubeosis iridis, pseudoxanthoma elasticum);
 - g. Radiation retinopathy;
 - h. Retinopathy of prematurity (ROP);
2. Prescribed by or in consultation with an ophthalmologist;
3. Request is for bevacizumab intravitreal solution;
**Requests for IV formulations of Alymsys, Avastin, Mvasi, Vegzelma, and Zirabev, will not be approved*
4. Request meets one of the following (a or b):
 - a. Dose does not exceed 2.5 mg per dose;
 - b. Dose is within FDA maximum limit for any FDA-approved indication or is supported by practice guidelines or peer-reviewed literature for the relevant off-label use (*prescriber must submit supporting evidence*).

Approval Duration: 12 months

- E. Other Non-FDA Approved Indications (off-label)** – Refer to the off-label use policy:
PA.CP.PMN.53

II. Continued Approval

A. All Indications in Section I (must meet all):

1. Currently receiving medication via PA Health & Wellness benefit or member has previously met all initial approval criteria or the Continuity of Care policy (PA.PHARM.01) applies;
2. Member is responding positively to therapy;
3. For Alymsys, Avastin, Avzivi, Jobevne, or Vegzelma requests for non-ophthalmology uses, member meets one of the following (a or b);
 - a. Member must use Mvasi or Zirabev, unless both are contraindicated or clinically adverse effects are experienced;*

**Prior authorization may be required for Mvasi and Zirabev*

 - b. Request is for Stage IV or metastatic cancer;
4. If request is for a dose increase, request meets one of the following (a or b):
 - a. New dose does not exceed 15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks (*see Appendix E for dose rounding guidelines*);
 - b. New dose is supported by practice guidelines or peer-reviewed literature for the relevant off-label use (*prescriber must submit supporting evidence*).

Approval duration: 12 months

B. Other diagnoses/indications (must meet 1 or 2):

1. Currently receiving medication via PA Health & Wellness benefit and documentation supports positive response to therapy or the Continuity of Care policy (PA.PHARM.01) applies.
2. For Alymsys, Avastin, Avzivi, Jobevne, or Vegzelma requests for non-ophthalmology uses, member meets one of the following (a or b);
 - a. Member must use Mvasi or Zirabev, unless both are contraindicated or clinically adverse effects are experienced;*

**Prior authorization may be required for Mvasi and Zirabev*

 - b. Request is for Stage IV or metastatic cancer;

Approval duration: Duration of request or 6 months (whichever is less); or

3. Refer to PA.CP.PMN.53

III. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

5-FU: fluorouracil

CapeOX: capecitabine, oxaliplatin

CRC: colorectal cancer

DME: diabetic macular edema

DR: diabetic retinopathy

FDA: Food and Drug Administration

FOLFIRI: fluorouracil, leucovorin,
irinotecan

FOLFIRINOX: fluorouracil, leucovorin,
irinotecan, oxaliplatin

FOLFOX: fluorouracil, leucovorin,
oxaliplatin

HCC: hepatocellular carcinoma

IDH: isocitrate dehydrogenase gene

IROX: irinotecan, oxaliplatin

nAMD: neovascular (wet) age-related
macular degeneration

NCCN: National Comprehensive Cancer Network
NSCLC: non-small cell lung cancer

PD-L1: programmed death-ligand 1
RCC: renal cell carcinoma
ROP: retinopathy of prematurity
RVO: retinal vein occlusion

Appendix B: Therapeutic Alternatives

This table provides a listing of preferred alternative therapy recommended in the approval criteria. The drugs listed here may not be a formulary agent and may require prior authorization.

| Drug Name | Dosing Regimen | Dose Limit/ Maximum Dose |
|--|----------------|--------------------------|
| HCC | | |
| Example of first-line systemic therapy: • Lenvima® (lenvatinib) sorafenib (Nexavar®) | Various doses | Varies |

Appendix C: Contraindications/Boxed Warnings

None reported

Appendix D: General Information

- Fatal pulmonary hemorrhage can occur in patients with NSCLC treated with chemotherapy and bevacizumab. The incidence of severe or fatal hemoptysis was 31% in patients with squamous histology and 2.3% with NSCLC excluding predominant squamous histology. Patients with recent hemoptysis should not receive bevacizumab.

Appendix E: Dose Rounding Guidelines

| Weight-based Dose Range | Vial Quantity Recommendation |
|-------------------------|--|
| ≤ 104.99 mg | 1 vial of 100 mg/4 mL |
| 105 mg-209.99 mg | 2 vials of 100 mg/4 mL |
| 210 mg-314.99 mg | 3 vials of 100 mg/4 mL |
| 315 mg-419.99 mg | 1 vial of 400 mg/16 mL |
| 420 mg-524.99 mg | 1 vial of 100 mg/4 mL and 1 vial of 400 mg/16 mL |
| 525 mg-629.99 mg | 2 vials of 100 mg/4 mL and 1 vial of 400 mg/16 mL |
| 630 mg-734.99 mg | 3 vials of 100 mg/4 mL and 1 vial of 400 mg/16 mL |
| 735 mg-839.99 mg | 2 vials of 400 mg/16 mL |
| 881 mg-944.99 mg | 1 vials of 100 mg/4 mL and 2 vials of 400 mg/16 mL |
| 945 mg-1,049.99 mg | 2 vials of 100 mg/4 mL and 2 vials of 400 mg/16 mL |
| 1,050 mg-1,154.99 mg | 3 vials of 100 mg/4 mL and 2 vials of 400 mg/16 mL |
| 1,155 mg-1,259.99 mg | 3 vials of 400 mg/16 mL |
| 1,260 mg-1,364.99 mg | 1 vials of 100 mg/4 mL and 3 vials of 400 mg/16 mL |
| 1,365 mg-1,469.99 mg | 2 vials of 100 mg/4 mL and 3 vials of 400 mg/16 mL |
| 1,470 mg-1,574.99 mg | 3 vials of 100 mg/4 mL and 3 vials of 400 mg/16 mL |
| 1,575 mg-1,679.99 mg | 4 vials of 400 mg/16 mL |
| 1,680 mg-1,784.99 mg | 1 vials of 100 mg/4 mL and 4 vials of 400 mg/16 mL |

| Weight-based Dose Range | Vial Quantity Recommendation |
|-------------------------|--|
| 1,785 mg-1,889.99 mg | 2 vials of 100 mg/4 mL and 4 vials of 400 mg/16 mL |
| 1,890 mg-1,994.99 mg | 3 vials of 100 mg/4 mL and 4 vials of 400 mg/16 mL |
| 1,995 mg-2,099.99 mg | 5 vials of 400 mg/16 mL |

IV. Dosage and Administration

| Indication | Dosing Regimen | Maximum Dose |
|--|--|--|
| Metastatic colorectal cancer | 5 mg/kg or 10 mg/kg once every 14 days as an IV infusion in combination with a 5-FU based chemotherapy regimen until disease progression is detected. 5 mg/kg every 2 weeks or 7.5 mg/kg every 3 weeks when used in combination with a fluoropyrimidine-irinotecan or fluoropyrimidine-oxaliplatin based chemotherapy regimen in patients who have progressed on a first-line bevacizumab product -containing regimen | 15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks |
| Non-squamous, non-small cell lung cancer | 15 mg/kg IV infusion every 3 weeks with carboplatin/paclitaxel | 15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks |
| Recurrent glioblastoma | 10 mg/kg IV every 2 weeks | 10 mg/kg IV every 2 weeks |
| Metastatic RCC | 10 mg/kg IV every 2 weeks with interferon alfa | 10 mg/kg IV every 2 weeks |
| Persistent, recurrent, or metastatic cervical cancer | 15 mg/kg IV every 3 weeks with paclitaxel and cisplatin or paclitaxel and topotecan | 15 mg/kg IV every 3 weeks |

| Indication | Dosing Regimen | Maximum Dose |
|--|---|--|
| Epithelial ovarian, fallopian tube, or primary peritoneal cancer | <u>Stage III or IV disease following initial surgical resection</u> 15 mg/kg IV every 3 weeks with carboplatin/paclitaxel for up to 6 cycles, followed by bevacizumab 15 mg/kg every | 15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks |
| HCC | 15 mg/kg IV every 3 weeks plus Tecentriq 1,200 mg IV on the same day | 15 mg/kg IV every 3 weeks |
| nAMD [†] , DME [†] , macular edema secondary to RVO [†] , neovascular glaucoma [†] | 1.25 mg administered by intravitreal injection every 4 weeks | 2.5 mg/dose |
| DR [†] , choroidal neovascularization [†] , radiation | 1.25 mg administer by intravitreal injection | 2.5 mg/dose |
| ROP [†] | 0.2 mg administered by intravitreal injection | 2.5 mg/dose |

[†]Off-label

V. Product Availability

Single-use vials: 100 mg/4 mL, 400 mg/16 mL

VI. References

1. Avastin Prescribing Information. South San Francisco, CA: Genentech, Inc. September 2022. Available at: www.avastin.com. Accessed July 30, 2025.
2. Mvasi Prescribing Information. Thousand Oaks, CA: Amgen Inc. June 2025. Available at: <https://www.mvasi.com/hcp>. Accessed July 30, 2025.
3. Zirabev Prescribing Information. New York, NY: Pfizer Inc.; August 2024. Available at: <http://labeling.pfizer.com/ShowLabeling.aspx?id=11860>. Accessed July 30, 2025.
4. Alymsys Prescribing Information. Bridgewater, NJ: Amneal Pharmaceuticals, LLC. April 2022. Available at https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/761231s000lbl.pdf. Accessed July 30, 2025.
5. Vegzelma Prescribing Information. Incheon, Republic of Korea: Celltrion. February 2023. Available at: <https://www.vegzelma.com>. Accessed July 30, 2025.
6. Avzivi Prescribing Information. Guangzhou, Guangdong Province, China: Bio-Thera Solutions, Ltd.; December 2023. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/761198s000lbl.pdf. Accessed July 30, 2025.
7. Jobevne Prescribing Information. Cambridge, MA: Biocon Biologics; April 2025. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2025/761175s000lbl.pdf. Accessed July 30, 2025.
Oncology
8. National Comprehensive Cancer Network Drugs and Biologics Compendium. Available at: http://www.nccn.org/professionals/drug_compendium. Accessed July 29, 2025.

9. National Comprehensive Cancer Network. Central Nervous System Cancers Version 1.2025. Available at: https://www.nccn.org/professionals/physician_gls/pdf/cns.pdf. Accessed July 29, 2025.
10. National Comprehensive Cancer Network. Ovarian Cancer Version 3.2025. Available at: https://www.nccn.org/professionals/physician_gls/pdf/ovarian.pdf. Accessed July 29, 2025.
11. National Comprehensive Cancer Network. Cervical Cancer Version 4.2025. Available at: https://www.nccn.org/professionals/physician_gls/pdf/cervical.pdf. Accessed July 29, 2025.
12. National Comprehensive Cancer Network. Hepatocellular Carcinoma Version 1.2025. Available at: https://www.nccn.org/professionals/physician_gls/pdf/hcc.pdf. Accessed July 30, 2025.
13. National Comprehensive Cancer Network. Kidney Cancer Version 1.2026. Available at: https://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf. Accessed July 29, 2025.
14. National Comprehensive Cancer Network. Non-Small Cell Lung Cancer Version 7.2025. Available at: https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf. Accessed July 29, 2025.
15. Fahrenbruch R, Kintzel P, Bott AM., et al. Dose rounding of biologic and cytotoxic anticancer agents: a position statement of the hematology/oncology pharmacy association. *Journal of Oncology Practice*. 2018;14(3)e130-e136.
Ophthalmology
16. American Academy of Ophthalmology Retina/Vitreous Panel. Preferred Practice Pattern® Guidelines. Age-Related Macular Degeneration. San Francisco, CA: American Academy of Ophthalmology; September 2024. Available at: <https://www.aao.org/preferred-practice-pattern/age-related-macular-degeneration-ppp>. Accessed July 30, 2025.
17. American Academy of Ophthalmology Retina/Vitreous Panel. Preferred Practice Pattern® Guidelines. Retinal Vein Occlusions. San Francisco, CA: American Academy of Ophthalmology; September 2024. Available at: <https://www.aao.org/preferred-practice-pattern/retinal-vein-occlusions-ppp>. Accessed July 30, 2025.
18. American Academy of Ophthalmology Retina/Vitreous Panel. Preferred Practice Pattern® Guidelines. Diabetic Retinopathy. San Francisco, CA: American Academy of Ophthalmology; September 2024. Available at: <https://www.aao.org/preferred-practice-pattern/diabetic-retinopathy-ppp>. Accessed July 30, 2025.
19. Wen JC, Shah VA, Leng T, et al. Radiation retinopathy. *American Academy of Ophthalmology EyeWiki*. Available at: https://eyewiki.org/Radiation_Retinopathy. Last updated July 2, 2024. Accessed July 30, 2025.
20. Finger PT, Chin KJ, Semenova EA. Intravitreal anti-VEGF therapy for macular radiation retinopathy: a 10-year study. *Eur J Ophthalmol*. 2016; 26(1):60-66.
21. Shields CL, Dalvin LA, Chang M, et al. Visual outcome at 4 years following plaque radiotherapy and prophylactic intravitreal bevacizumab (every 4 months for 2 years) for uveal melanoma: Comparison with nonrandomized historical control individuals. *JAMA Ophthalmol*. 2020;138(2):136-146. doi:10.1001/jamaophthalmol.2019.5132.
22. De Ribot FM, Miller AM, Stevenson E, et al. Retinopathy of prematurity. *American Academy of Ophthalmology EyeWiki*. Available at: https://eyewiki.org/Retinopathy_of_Prematurity. Accessed August 12, 2024.
23. Mintz-Hittner HA, Kennedy KA, Chuang AZ, and the BEAT-ROP Cooperative Group. Efficacy of intravitreal bevacizumab for stage 3+ retinopathy of prematurity. *N Engl J Med* 2011;364:603-615. doi: 10.1056/NEJMoa1007374

24. Sankar MJ, Sankar J, Chandra P. Anti-vascular endothelial growth factor (VEGF) drugs for treatment of retinopathy of prematurity. *Cochrane Database Syst Rev* 2018; 1:CD009734.
25. Modarres M, Naseripour M, Falavarjani KG, Nikeghbali A, Hashemi M, Parvaresh MM. Intravitreal injection of 2.5 mg versus 1.25 mg bevacizumab (Avastin) for treatment of CNV associated with AMD. *Retina*. 2009 Mar;29(3):319-24. doi:10.1097/IAE.0b013e318198148e.

Coding Implications

Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| HCPCS Codes | Description |
|-------------|---|
| C9257 | Injection, bevacizumab, 0.25 mg |
| J9035 | Injection, bevacizumab, 10 mg |
| J9999 | Not otherwise classified, antineoplastic drugs |
| Q5107 | Injection, bevacizumab-awwb, biosimilar, (Mvasi), 10 mg |
| Q5118 | Injection, bevacizumab-bvcr, biosimilar, (Zirabev), 10 mg |
| Q5126 | Injection, bevacizumab-maly, biosimilar, (Alymsys), 10 mg |
| Q5129 | Injection, bevacizumab-adcd (Vegzelma), biosimilar, 10 mg |

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

The following is a list of diagnosis codes that support coverage for the applicable covered procedure code(s).

| ICD-10-CM Code | Description |
|------------------|--|
| A18.53 | Tuberculosis chorioretinitis |
| C17.0 – C17.9 | Malignant neoplasm of small intestine |
| C18.0 – C18.9 | Malignant neoplasm of colon |
| C19 | Malignant neoplasm of rectosigmoid junction |
| C20 | Malignant neoplasm of rectum |
| C21.8 | Malignant neoplasm of overlapping sites of rectum, anus and anal canal |
| C33 | Malignant neoplasm of trachea |
| C34.00 – C34.02 | Malignant neoplasm of main bronchus |
| C34.10 – C34.12 | Malignant neoplasm of upper lobe, bronchus or lung |
| C34.2 | Malignant neoplasm of middle lobe, bronchus or lung |
| C34.30 – C34.32 | Malignant neoplasm of lower lobe, bronchus or lung |
| C34.80 – C34.82 | Malignant neoplasm of overlapping sites of bronchus and lung |
| C34.90 – C34.92 | Malignant neoplasm of unspecified part of bronchus or lung |
| C48.0 – C48.8 | Malignant neoplasm of retroperitoneum and peritoneum |
| C49.0 – C49.9 | Malignant neoplasm of other connective and soft tissue |
| C50.01 – C50.929 | Malignant neoplasm of breast |
| C53.0 – C53.9 | Malignant neoplasm of cervix uteri |
| C54.0 – C55 | Malignant neoplasm of corpus uteri |

| ICD-10-CM Code | Description |
|---|---|
| C56.1 – C56.9 | Malignant neoplasm of ovary |
| C57.0 – C57.9 | Malignant neoplasm of other and unspecified female genital organs |
| C64.1 – C64.9 | Malignant neoplasm of kidney, except renal pelvis |
| C65.1 – C65.9 | Malignant neoplasm of renal pelvis |
| C70.0 – C70.9 | Malignant neoplasm of meninges |
| C71.0 – C71.9 | Malignant neoplasm of brain |
| C72.0 – C72.9 | Malignant of spinal cord, cranial neoplasm nerves and other parts of central nervous system |
| D32.0 – D32.9 | Benign neoplasm of meninges |
| D42.0 – D42.9 | Neoplasm of uncertain behavior of meninges |
| E08.311, E08.3211 – E08.3219, E08.3311 – E08.3319, E08.3411 – E08.3419, E08.3511 – E08.3519 | Diabetes mellitus due to underlying condition with diabetic retinopathy with macular edema |
| E09.311, E09.3211 – E09.3219, E09.3311 – E09.3319, E09.3411 – E09.3419, E09.3511 – E09.3519 | Drug or chemical induced diabetes mellitus with diabetic retinopathy with macular edema |
| E10.311, E10.3211 – E10.3219, E10.3311 – E10.3319, E10.3411 – E10.3419, E10.3511 – E10.3519 | Type 1 diabetes mellitus with diabetic retinopathy with macular edema |
| E11.311, E11.3211 – E11.3219, E11.3311 – E11.3319, E11.3411 – E11.3419, E11.3511 – E11.3519 | Type 2 diabetes mellitus with diabetic retinopathy with macular edema |
| E13.311, E13.3211 – E13.3219, E13.3311 – E13.3319, E13.3411 – E13.3419, E13.3511 – E13.3519 | Other specified diabetes mellitus with diabetic retinopathy with macular edema |
| H16.401 – H16.449 | Corneal neovascularization |
| H30.001 – H30.049 | Focal chorioretinal inflammation |
| H30.101 – H30.139 | Disseminated chorioretinal inflammation |
| H30.891 – H30.899 | Other chorioretinal inflammations |
| H30.90 – H30.93 | Unspecified chorioretinal inflammations |
| H32 | Chorioretinal disorders in diseases classified elsewhere |
| H34.8110 – H 34.8192 | Central retinal vein occlusion |
| H34.8310 – H34.8392 | Tributary (branch) retinal vein occlusion |
| H35.051 – H35.059 | Retinal neovascularization, unspecified |

| ICD-10-CM Code | Description |
|---------------------|---|
| H35.141 – H35.169 | Retinopathy of prematurity, stages 3 through 5 |
| H35.3210 – H35.3293 | Exudative age-related macular degeneration |
| H35.33 | Angioid streaks of macula |
| H35.81 | Retinal edema |
| H40.50X0-H40.53X4 | Glaucoma secondary to other eye disorders [associated with vascular disorders of eye] |
| H44.20-H44.23 | Degenerative myopia |
| H44.2A1-H44.2A9 | Degenerative myopia with choroidal neovascularization |
| I67.89 | Other cerebrovascular disease |
| Z85.038 | Personal history of other malignant neoplasm of large intestine |
| Z85.048 | Personal history of other malignant neoplasm of rectum, rectosigmoid junction, and anus |
| Z85.068 | Personal history of other malignant neoplasm of small intestine |
| Z85.118 | Personal history of other malignant neoplasm of bronchus and lung |
| Z85.3 | Personal history of malignant neoplasm of breast |
| Z85.41 | Personal history of malignant neoplasm of cervix uteri |
| Z85.42 | Personal history of malignant neoplasm of other parts of uterus |
| Z85.43 | Personal history of malignant neoplasm of ovary |
| Z85.44 | Personal history of malignant neoplasm of other female genital organs |
| Z85.528 | Personal history of other malignant neoplasm of kidney |
| Z85.53 | Personal history of malignant neoplasm of renal pelvis |
| Z85.841 | Personal history of malignant neoplasm of brain |
| Z85.848 | Personal history of malignant neoplasm of other parts of nervous tissue |

| Reviews, Revisions, and Approvals | Date |
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| Specialist involvement in care added to all indications. Added specific criteria for off-label uses for ophthalmic indications. Added allowable off-label oncology indications as reflected in the NCCN compendium. Approval duration lengthened to 6 and 12 months. References reviewed and updated | |
| 3Q 2019 annual review: No changes per Statewide PDL implementation 01/01/2020 | 07/2019 |
| 4Q 2019 annual review: No changes per Statewide PDL implementation 01-01-2020 | 10/2019 |
| Added biosimilar, Zirabev, to the policy; added NCCN category 2A recommended off-label uses: meningioma, small bowel adenocarcinoma; added additional ICD-10 codes for meningioma per NCCN (D32.0–D32.9, D42.0–D42.9, I67.89); updated glioblastoma, cervical cancer, and epithelial ovarian, fallopian tube, or primary peritoneal cancer FDA-approved indications in approval criteria; added redirection to Mvasi for Avastin; references reviewed and updated. | 01/2020 |

| Reviews, Revisions, and Approvals | Date |
|---|---------|
| <p>4Q 2020 annual review: Added requirement for redirection to Mvasi or Zirabev to Section I and II for non-ophthalmology uses; RT4 policy update to add criteria for newly FDA-approved indication for first-line therapy for HCC in combination with atezolizumab; removed AIDS-related Kaposi sarcoma as an off label use as it is no longer NCCN supported; added additional NCCN supported regimens for colorectal cancer, non-squamous non-small cell lung cancer, renal cell carcinoma, cervical cancer, and epithelial ovarian, fallopian tube, or primary peritoneal cancer; added to Section IB metastatic spine tumors or brain metastases and vulvar cancer diagnoses which are supported by NCCN; added appendix F: dose rounding guidelines; added reference to appendix F within criteria; references reviewed and updated.</p> | 10/2020 |
| <p>4Q 2021 annual review: RT4: FDA indication language updated for Zirabev to reflect expansion of indication to include epithelial ovarian, fallopian tube, or primary peritoneal cancer; amended language for ophthalmology non-FDA approved indications to be: request is for bevacizumab intravitreal solution; Ad Hoc update: applied redirection of Avastin to preferred biosimilars to other diagnoses/indications; amended redirection language to “must use” per template update; added additional NCCN-supported regimens and classifications for colorectal cancer, NSCLC, glioblastoma, cervical cancer, and epithelial ovarian, fallopian tube, or primary peritoneal cancer; added criterion that HCC be classified as Child-Pugh class A disease per NCCN; added low-grade WHO grade I glioma to NCCN-supported off-label indication; added Nevada to Appendix E; references reviewed and updated.</p> | 10/2021 |
| <p>4Q 2022 annual review: added additional NCCN-supported indications of ampullary adenocarcinoma cancer, malignant peritoneal mesothelioma, and pediatric diffuse high-grade glioma; re-classified anaplastic gliomas to astrocytoma and oligodendroglioma per updated NCCN classification; removed breast cancer indication, WHO grade 2 glioma indication, and single-agent therapy option for cervical cancer per NCCN; removed “radiographic and/or clinical relapse”, “recurrent”, and “carcinosarcoma with... BRCA 1/2 mutation” disease qualifiers for ovarian cancer as there are other clinical scenarios per NCCN; added new regimens for cervical and colorectal cancers per NCCN; aligned initial approval durations as 6 months, and aligned redirection to Mvasi or Zirabev; references reviewed and updated.</p> | 10/2022 |
| <p>Added Vegzelma. Updated HCPCS code: added [Q5126].</p> | 04/2023 |
| <p>4Q annual review: per NCCN – for colorectal cancer, added that disease is advanced, metastatic, or unresectable; for cervical cancer added option for single-agent therapy; for RCC removed combination therapy option with interferon alfa; for ovarian cancers simplified bevacizumab combination therapy criterion when used with a platinum and chemotherapy along with corresponding staging update to IB-IV disease, added combination therapy option with gemcitabine for platinum-resistant disease, and removed</p> | 10/2023 |

| Reviews, Revisions, and Approvals | Date |
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| combination therapy with Zejula; for HCC added Child-Pugh class B option; clarified off-label indication of primary central nervous system cancer is specifically for lymphoma; modified low-grade (WHO Grade I) glioma to circumscribed glioma; revised mesotheliomas to remove “malignant” per terminology change; references reviewed and updated. | |
| RT4: added newly FDA-approved biosimilar Avzivi to policy; for ovarian cancers, added combination therapy with Zejula per NCCN; created separate section for oncology – non-FDA-approved indications for pediatrics to include diffuse high-grade glioma. | 01/2024 |
| 4Q 2024 annual review: re-organized FDA-approved indications for improved clarity; <i>for the following oncology indications, revised the following per NCCN:</i> for NSCLC, added qualifier of unresectable, specified sensitizing EGFR mutation for combination use with erlotinib, added additional agents with which pemetrexed and Tecentriq can be prescribed, removed requirement that the combination of carboplatin and paclitaxel is reserved for first-line treatment; for RCC, added qualifier of relapsed; for ovarian cancer, removed requirement that use with platinum agent + chemotherapy followed by single agent bevacizumab be limited to Stage IB-IV disease, added that combination with Zejula may be used for maintenance therapy if intolerant to Lynparza, added additional combination regimens for platinum-resistant disease (cyclophosphamide and Keytruda, Ixempra, Elahere), added combination with Elhere for platinum-sensitive disease; for HCC, removed requirement that disease is Child-Pugh class A or B and added pathway for adjuvant therapy in members at high risk of recurrence following resection or ablation; added additional off-label uses (pleomorphic xanthroastrocytoma, gliosarcoma, H3-mutated high-grade glioma, high-grade astrocytoma with piloid features, neurofibromatosis type 2 vestibular schwannomas with hearing loss, vaginal cancer); added requirement for combination use for ampullary adenocarcinoma, peritoneal mesothelioma, pleural mesothelioma, small bowel adenocarcinoma, or vulvar cancer; <i>for ophthalmology uses:</i> revised choroidal neovascularization to allow any cause and added additional examples, added radiation retinopathy and retinopathy of prematurity as supported by literature, added requirement for ophthalmologist prescriber, removed age restriction as some covered diagnoses may affect pediatric populations; references reviewed and updated. | 10/2024 |
| RT4: added newly FDA-approved biosimilar Jobevne to criteria; for cervical cancer, added Tecentriq as an option to combination therapy for paclitaxel/cisplatin and paclitaxel/carboplatin, and clarified topotecan is used with paclitaxel per NCCN; for HCC, removed option for use as adjuvant therapy following resection or ablation and member is at high risk for recurrence and added option for use as subsequent-line systemic therapy if progression on or after systemic therapy per NCCN. | 05/2025 |
| 4Q 2025 annual review: extended initial approval duration from 6 months to 12 months for this maintenance medication for a chronic condition; <i>for the following oncology indications, revised the following per NCCN:</i> for epithelial ovarian, fallopian tube, and primary peritoneal cancer, added option | 10/2025 |

CLINICAL POLICY
Bevacizumab and Biosimilars



| Reviews, Revisions, and Approvals | Date |
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| for combination use in platinum-resistant persistent disease with carboplatin and paclitaxel, carboplatin and gemcitabine, or carboplatin and liposomal doxorubicin; added additional off-label use in primary spinal cord tumors; <i>for ophthalmology uses</i> , revised diabetic retinopathy to allow any cause and stage; references reviewed and updated. | |