

## CLINICAL POLICY

### Bevacizumab and Biosimilars

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

Reference Number: PA.CP.PHAR.93

Effective Date: 01/2018

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### Description

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

### FDA Approved Indication(s)

Avastin, Alymsys, Avzivi, 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/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/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, 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. 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-g):
  - 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<sup>®</sup> 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<sup>®</sup> 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 singleagent;
      - 2) In combination with everolimus;
      - 3) For advanced papillary RCC, including hereditary leiomyomatosis and renal cell carcinoma-associated RCC, only: In combination with erlotinib
    - iii. For cervical cancer, both of the following (1 and 2):
      - 1) Disease is persistent, recurrent, or metastatic;
      - 2) Prescribed in one of the following ways (a, b or c)
        - a. As a single agent;

- b. In combination with paclitaxel and cisplatin, carboplatin, or topotecan;
- c. In combination with Keytruda<sup>®</sup>, paclitaxel, and cisplatin/carboplatin for PD-L1-positive disease;
- e. 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<sup>®</sup> (or Zejula<sup>®</sup> if unable to tolerate Lynparza) for stage II-IV disease;
  - iv. For platinum-resistant persistent disease or recurrence, in combination with paclitaxel, liposomal doxorubicin, topotecan, gemcitabine, or cyclophosphamide, cyclophosphamide and Keytruda, Ixempra<sup>®</sup> (if previously treated with a taxane), or Elahere<sup>™</sup> (in folate receptor-alpha expressing tumors);;
  - v. For platinum-sensitive persistent disease or recurrence prescribed in 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;
- f. For HCC, prescribed in combination with Tecentriq<sup>®</sup> as one of the following (i or ii):
  - i. First-line systemic therapy, and:
    - 1) Disease is unresectable or metastatic;
  - ii. Adjuvant therapy following resection or ablation, and:
    - 1) Member is at high risk for recurrence (defined as size > 5 cm, > 3 tumors, macrovascular invasion or microvessel invasion on histology, or grade 3/4 histology);
- 5. For Alymsys, Avastin, Avzivi, 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: 6 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. Small bowel adenocarcinoma;
  - l. Soft tissue sarcoma – solitary fibrous tumor or angiosarcoma;
  - m. Vulvar cancer – squamous cell carcinoma;
  - n. Neurofibromatosis type 2 vestibular schwannomas with hearing loss;
  - o. Vaginal cancer;
  - p. Other NCCN category I, 2A, and 2B recommendations;
2. Prescribed by or in consultation with an oncologist;
3. For Alymsys, Avastin, Avzivi 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;
4. For ampullary adenocarcinoma, peritoneal mesothelioma, pleural mesothelioma, small bowel adenocarcinoma, or vulvar cancer: Prescribed as part of combination therapy;
5. For neurofibromatosis type 2 vestibular schwannomas with hearing loss: Prescribed as a single agent;
6. 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: 6 months**

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

1. Diagnosis of one of the following (a or b):
  - a. Diffuse high-grade glioma;
  - b. Medulloblastoma;
2. Prescribed by or in consultation with an oncologist;
3. Age < 18 years;

4. For Alymsys, Avastin, Avzivi, 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: 6 months**

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

1. Diagnosis of one of the following conditions:
  - a. Neovascular (wet) age-related macular degeneration;
  - b. Macular edema following retinal vein occlusion;
  - c. Diabetic macular edema;
  - d. Proliferative diabetic retinopathy;
  - 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. Diabetic retinopathy associated with ocular neovascularization (choroidal, retinal, iris);
  - h. Radiation retinopathy;
  - i. Retinopathy of prematurity;
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: 6 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 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: 6 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 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	HCC: hepatocellular carcinoma
CapeOX: capecitabine, oxaliplatin	IDH: isocitrate dehydrogenase gene
FDA: Food and Drug Administration	IROX: irinotecan, oxaliplatin
FOLFIRI: fluorouracil, leucovorin, irinotecan	NCCN: National Comprehensive Cancer Network
FOLFIRINOX: fluorouracil, leucovorin, irinotecan, oxaliplatin	NSCLC: non-small cell lung cancer
FOLFOX: fluorouracil, leucovorin, oxaliplatin	PD-L1: programmed death-ligand 1
	RCC: renal cell carcinoma

*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
<i>Metastatic carcinoma of the colon or rectum</i>		

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
FOLFOX4 = Infusional 5-FU/leucovorin/ oxaliplatin	Oxaliplatin 85 mg/m <sup>2</sup> IV over 2 hours day 1; leucovorin 200 mg/m <sup>2</sup> IV over 2 hours days 1 & 2, followed by 5-FU 400 mg/m <sup>2</sup> IV bolus over 2-4 minutes, followed by 600 mg/m <sup>2</sup> IV 5-FU continuous infusion over 22 hours on days 1 & 2. Repeat cycle every 14 days.	Varies
FOLFIRI = Infusional 5-FU/ leucovorin/Camptosar <sup>®</sup> (irinotecan)	Camptosar 180 mg/m <sup>2</sup> IV over 90 minutes day 1; Leucovorin 400 mg/m <sup>2</sup> IV over 2 hours day 1 followed by 5-FU 400 mg/m <sup>2</sup> IV bolus over 2-4 minutes, followed by 2.4 gm/m <sup>2</sup> IV 5-FU continuous infusion over 46 hours. Repeat cycle every 14 days.	Varies
capecitabine (Xeloda <sup>®</sup> )	2500 mg/m <sup>2</sup> PO BID for 2 weeks; repeat cycles of 2 weeks on and 1 week off. For patients who cannot tolerate intensive therapy.	Varies
IROX = oxaliplatin/ Camptosar (irinotecan)	Oxaliplatin 85 mg/m <sup>2</sup> IV followed by Camptosar 200 mg m <sup>2</sup> IV over 30-90 minutes every 3 weeks	Varies
Camptosar (irinotecan)	180 mg/m <sup>2</sup> IV every 2 weeks or 300-350 mg/m <sup>2</sup> IV every 3 weeks	Varies
Lonsurf <sup>®</sup> (trifluridine and tipiracil)	35 mg/m <sup>2</sup> (based on trifluridine component) PO BID on days 1-5 and 8-12, repeated every 28 days	Trifluridine 80 mg/dose
<b>NSCLC</b>		
Examples of drugs used in single- or multi-drug chemotherapy regimens: <ul style="list-style-type: none"> <li>Cisplatin, carboplatin, paclitaxel, docetaxel, vinorelbine, gemcitabine, etoposide, irinotecan, vinblastine, mitomycin, ifosfamide, pemetrexed disodium, (Alimta<sup>®</sup>) erlotinib (Tarceva<sup>®</sup>), Tecentriq<sup>®</sup> (atezolizumab)</li> </ul>	Various doses	Varies
<b>Ovarian Cancer</b>		
Examples of drugs used in single-	Various doses	Varies



Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
or multi-drug chemotherapy regimens: <ul style="list-style-type: none"> <li>carboplatin and paclitaxel, docetaxel and carboplatin, Lynparza® (olaparib),</li> </ul>		
<b><i>Glioblastoma Multiforme</i></b>		
temozolomide (Temodar®)	Maintenance phase cycles: 150 mg- 200 mg/m <sup>2</sup> PO days 1-5. Repeat every 28 days.	Varies
carmustine (Bicnu®)	150 mg to 200 mg/m <sup>2</sup> IV on day 1. Repeat every 6-8 weeks for one year or tumor progression.	Varies
<b><i>Cervical Cancer</i></b>		
Examples of drugs used in multi-drug chemotherapy regimens: <ul style="list-style-type: none"> <li>cisplatin/paclitaxel, carboplatin/paclitaxel, cisplatin/topotecan (Hycamtin®), topotecan/paclitaxel</li> </ul>	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



Weight-based Dose Range	Vial Quantity Recommendation
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
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 Avastin-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
Ovarian cancer, stage III or IV disease following initial surgical resection	15 mg/kg IV infusion every 3 weeks with carboplatin/paclitaxel for up to 6 cycles, followed by bevacizumab 15 mg/kg every 3 weeks as a single agent	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks
Platinum resistant ovarian cancer	10 mg/kg intravenously every 2 weeks with weekly paclitaxel, liposomal doxorubicin, or topotecan	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks
Platinum sensitive ovarian cancer	15 mg/kg intravenously every 3 weeks with carboplatin and paclitaxel or with carboplatin and gemcitabine, followed by bevacizumab 15 mg/kg every 3 weeks as a single agent	15 mg/kg IV every 3 weeks

Indication	Dosing Regimen	Maximum Dose
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
Clear cell renal carcinoma	10 mg/kg IV every 2 weeks with interferon alfa	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks
Glioblastoma multiforme, anaplastic astrocytoma, anaplastic oligodendroglioma	10 mg/kg IV every 2 weeks	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks
Soft tissue sarcoma	15 mg/kg IV infusion every 3 weeks	15 mg/kg IV every 3 weeks or 10 mg/kg
Cervical cancer	15 mg/kg IV infusion every 3 weeks (in combination with paclitaxel and either cisplatin or topotecan) until disease progression or unacceptable toxicity	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks
Neovascular (wet) macular degeneration	1.25 to 2.5 mg administered by intravitreal injection every 4 weeks	2.5 mg/dose
Neovascular glaucoma	1.25 mg administered by intravitreal injection every 4 weeks	2.5 mg/dose
Macular edema secondary to retinal vein occlusion	1 mg to 2.5 mg administered by intravitreal injection every 4 weeks	2.5 mg/dose
Proliferative diabetic retinopathy	1.25 mg administer by intravitreal injection 5 to 20 days before vitrectomy	2.5 mg/dose
Diabetic macular edema	1.25 mg administered by intravitreal injection	2.5 mg/dose

Indication	Dosing Regimen	Maximum Dose
Malignant mesothelioma of pleura	15 mg/kg IV (plus pemetrexed 500 mg/m <sup>2</sup> IV and cisplatin 75 mg/m <sup>2</sup> IV) every 21 days for up to 6 cycles, followed by maintenance bevacizumab 15 mg/kg every 21 days until disease progression or unacceptable toxicity. All patients should receive folic acid 400 mcg orally daily and vitamin B12 1000 mcg IM every 3 weeks, both beginning 7 days prior to pemetrexed and continuing for 3 weeks following the last pemetrexed dose (off-label dosage).	2.5 mg/dose
Metastatic colorectal cancer in previously untreated elderly patients ineligible for oxaliplatin- or irinotecan-based chemotherapy	7.5 mg/kg IV on day 1 with capecitabine 1,000 mg/m <sup>2</sup> orally twice daily on days 1 to 14, given every 3 weeks until disease progression.	15 mg/kg IV every 3 weeks or 10 mg/kg IV every 2 weeks.

**V. Product Availability**

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

**VI. References**

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**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

HCPCS Codes	Description
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
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

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ICD-10-CM Code	Description
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
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



ICD-10-CM Code	Description
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
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
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.	10/2020
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;	10/2021



Reviews, Revisions, and Approvals	Date
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.	
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.	10/2022
Added Vegzelma. Updated HCPCS code: added [Q5126].	04/2023
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 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.	10/2023
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,	10/2024

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**Bevacizumab and Biosimilars**



Reviews, Revisions, and Approvals	Date
<p>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.</p>	