Avastin® (Bevacizumab)

Effective Date: 12.9.11
Date Developed: 12.9.11 by Albert Reeves MD
Last Approval Date: 1.26.16, 1.24.17

Avastin (Bevacizumab) is an Antineoplastic Agent, Monoclonal Antibody; Vascular Endothelial Growth Factor (VEGF Inhibitor).

Authorization Criteria:

Combination Agent: metastatic colorectal cancer (with various agents); cervical cancer (with paclitaxel and either cisplatin or topotecan); non-small cell lung cancer/non-squamous histology (with carboplatin and paclitaxel); ovarian (epithelial), fallopian tube, or primary peritoneal cancer (platinum-resistant, recurrent - with paclitaxel, doxorubicin [liposomal], or topotecan); metastatic renal cell carcinoma (with interferon alfa)

Single Agent: glioblastoma;

Off-Label: age-related macular degeneration; metastatic breast cancer; recurrent or persistent endometrial cancer; soft tissue sarcoma (angiosarcoma; hemangiopericytoma)

Note: Dosage regimens are complex; refer to product literature

Pre-Authorization Criteria

VCHCP will authorize Avastin (Bevacizumab) for FDA indicated conditions such as for individuals with metastatic colorectal cancer, glioblastoma, nonsmall cell lung cancer (non-squamous histology), metastatic renal cell cancer and certain specific breast cancers.

Avastin will be approved for breast cancer treatment when:

1. It will be used in 1st or 2nd line therapy only. It should not be continued at progression coupled with a 2nd chemotherapy medication.
2. It can be used in triple negative (ER, PR, Her 2 all negative)
3. It can be used in patients with highly proliferative breast cancer.
4. It should not be used in low grade - ER, PR>50% malignancies.

VCHCP requires that Avastin is prescribed by an Oncologist.

**Dosing: ADULTS:**

Details concerning dosing in combination regimens should also be consulted.

Breast cancer, metastatic: I.V.: 10 mg/kg every 2 weeks (in combination with paclitaxel).

Colorectal cancer, metastatic: I.V.: 5 or 10 mg/kg every 2 weeks (in combination with fluorouracil-based chemotherapy)

Gioblastoma: 10 mg/kg every 2 weeks as monotherapy or in combination (unlabeled) with irinotecan (Vredenburgh, 2007)

Nonsmall cell lung cancer (nonsquamous cell histology): I.V.: 15 mg/kg every 3 weeks (in combination with carboplatin and paclitaxel) for 4-6 cycles followed by maintenance treatment (unlabeled use) or bevacizumab 15 mg/kg every 3 weeks as monotherapy until disease progression or unacceptable toxicity (Sandler, 2006)

Renal cell cancer, metastatic: 10 mg/kg every 2 weeks in combination with interferon alfa or (unlabeled) as monotherapy (Yang, 2003)

**WARNINGS / PRECAUTIONS**

Fistula formation (nongastrointestinal): Nongastrointestinal fistula formation (including tracheoesophageal, bronchopleural, biliary, vaginal, renal, and bladder fistulas) has been observed, most commonly within the first 6 months of treatment. Permanently discontinue in patients who develop internal organ fistulas.

Gastrointestinal perforation: **Gastrointestinal perforation, fistula (including gastrointestinal, enterocutaneous, esophageal, duodenal, and rectal fistulas), and intra-abdominal abscess have been reported in patients receiving bevacizumab for colorectal cancer and other cancers (not related to treatment duration).** Most cases occur within 50 days of treatment initiation; may be fatal in some cases; monitor patients for signs/symptoms (eg, fever, abdominal pain with constipation and/or nausea/vomiting). Permanently discontinue in patients who develop these complications.

Wound dehiscence: **Wound dehiscence/wound healing complications have been reported in patients (not related to treatment duration);** monitor patients
for signs/symptoms of improper wound healing. Permanently discontinue in patients who develop these complications. The appropriate intervals between administration of bevacizumab and surgical procedures to avoid impairment in wound healing has not been established. Therapy should not be initiated within 28 days of major surgery and only following complete healing of the incision. Bevacizumab should be discontinued at least 28 days prior to elective surgery. In a retrospective review of central venous access device placements, a greater risk of wound dehiscence was observed when port placement and bevacizumab administration were separated by <14 days (Erinjeri, 2011).

**DRUG Interactions**

Antineoplastic Agents ( Anthracycline): Bevacizumab may enhance the cardiotoxic effect of Antineoplastic Agents ( Anthracycline). *Risk C: Monitor therapy*

Irinotecan: Bevacizumab may enhance the adverse/toxic effect of Irinotecan. *Risk C: Monitor therapy*

SORAfenib: Bevacizumab may enhance the adverse/toxic effect of SORAfenib. Specifically, the risk for hand-foot skin reaction may be increased. *Risk C: Monitor therapy*

SUNItinib: May enhance the adverse/toxic effect of Bevacizumab. Specifically, the risk for a specific form of anemia, microangiopathic hemolytic anemia (MAHA), may be increased. Bevacizumab may enhance the hypertensive effect of SUNItinib. *Risk X: Avoid combination*

**REFERENCES**


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<tr>
<th>Revision Date</th>
<th>Content Revised (Yes/No)</th>
<th>Contributors</th>
<th>Review/Revision Notes</th>
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</thead>
<tbody>
<tr>
<td>1/24/17</td>
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<td>Annual review</td>
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</tbody>
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