



## Prior Authorization Approval Criteria

### *Epoetin alfa, darbepoetin alfa*

<b>Generic name:</b>	Epoetin alfa, darbepoetin alfa
<b>Brand names:</b>	<i>Epoetin alfa</i> : Procrit, Epogen <i>Darbepoetin alfa</i> : Aranesp
<b>Medication class:</b>	Erythropoietin stimulating agents; stem cell progenitors
<b>FDA-approved uses:</b>	<p><i>Epoetin alpha</i>: Treatment of anemia of chronic renal failure, zidovudine-treated HIV-infected patients, anemia in cancer patients on chemotherapy, and reduction of allogenic blood transfusions in surgery patients</p> <p><i>Darbepoetin alpha</i>: Treatment of anemia associated with chronic renal failure, including patients on dialysis and not on dialysis, and for the treatment of anemia in patients with nonmyeloid malignancies where anemia is due to effect of concomitantly administered chemotherapy.</p>
<b>Black box warnings (2008):</b>	<ul style="list-style-type: none"><li>• Use lowest dose needed to gradually raise hemoglobin to lowest level sufficient to avoid blood transfusions; measure hemoglobin twice a week for 2 – 6 weeks after dosage changes; withhold dose if Hgb exceeds 10 g/dl or rises by <math>\geq 1</math>g/dl in any 2-week period.</li><li>• Increased risk of thrombotic events and/or death in patients with CRF, cancer patients on chemotherapy, and surgical candidates</li><li>• Shortened survival and/or increased risk of tumor progression or recurrence in some patients with breast, non-small cell lung, head and neck, lymphoid, and cervical cancers</li><li>• Should not be used in patients with uncontrolled hypertension. Closely monitor blood pressure in patients with controlled hypertension.</li><li>• In cancer patients, use ESAs for treatment of anemia due <b>only</b> to concomitant myelosuppressive chemotherapy. ESAs are <b>not</b> indicated for patients receiving myelosuppressive chemotherapy when the anticipated outcome is cure.</li><li>• <b>Discontinue</b> after completion of a chemotherapy course.</li><li>• In renal failure patients, individualize dosing to achieve and maintain hemoglobin levels within the range of 10 to 12 g/dl. Patients titrated to higher target hemoglobin levels experienced greater risks of death and serious cardiovascular events.</li><li>• In perisurgical patients, Procrit increased the incidence of deep venous thromboses in patients not receiving prophylactic anticoagulation.</li><li>• Consider DVT prophylaxis.</li></ul>
<b>Duration of therapy:</b>	Sufficient to decrease/eliminate the need for transfusions; not to exceed a hemoglobin level of 12 g/dl for any of the ESA products for all indications

**Cost (based on ASP 2008):**

- *Aranesp*: \$1,682 weekly (based on 2.25 mcg/kg; 70 kg patient)
- *Procrit*: \$342 to \$719 per month, median (depends on indication; based on 70 kg patient)
- *Epogen*: \$542 per month (based on 75 u/kg dose 3 times a week for a 70 kg patient)

**Criteria for use (bullet points below are all inclusive unless otherwise noted):**

- Patients must have a hematocrit of less than 30% or a hemoglobin level less than 10g/dL prior to therapy. (this applies to all bullets)
- Clinically symptomatic anemia or transfusion dependence due to:
  - Anemia in chronic renal failure patients who are receiving dialysis or not receiving dialysis
  - CRF patients with symptomatic anemia with a hematocrit of less than 30% or a hemoglobin level less than 10g/dL prior to therapy

**OR**

- Patients with anemia due to myelosuppressive chemotherapy for metastatic non-myeloid malignancies

**OR**

- Treatment of HIV-infected patients whose anemia is due to zidovudine therapy

**OR**

- Anemic surgery patients with **all** of the following:
  - Surgery is elective, non cardiac, non-vascular
  - Hemoglobin level is less than  $> 10$  to  $\leq 13$  g/dL
  - At risk for perioperative transfusions due to significant anticipated blood loss (this includes patients who are expected to require 2 units of blood and who are not able or willing to participate in an autologous blood donation program)

**OR**

- Myelodysplasia or myelodysplastic syndromes
  - Results of diagnostic bone marrow biopsy and/or aspirate or evaluation of the peripheral smear are consistent with MDS
- If approved, Procrit must be used. Aranesp and/or Epogen will only be approved if patient is intolerant of Procrit.

**Symptoms of anemia include:** Fatigability, tachycardia, palpitation, tachypnea on exertion

**Not approved for continued therapy if:**

- After 12 weeks of treatment, the effectiveness has not been demonstrated by an improvement in the hematocrit and hemoglobin levels or by a significant decrease in transfusion requirements, in patients with chronic renal failure as a result of chemotherapy for a malignancy, or zidovudine-treated HIV patients
- Longer than 8 weeks following the final dose of myelosuppressive chemotherapy in a chemotherapy regimen
- Hemoglobin levels approach 12 g/dl **OR** increase by  $> 1$ g/dl in any 2-week period
- Note: Bullets 1 and 3 apply to all disease states, including MDS.

**Approved to continue therapy if:**

- Patients with CRF with symptomatic anemia either receiving dialysis or not receiving dialysis, undergoing treatment with erythropoietin analogues should have a hematocrit of less than 30% and hemoglobin of less than 10 g/dL to continue therapy.
- Cancer patients on myelosuppressive chemotherapy have a hemoglobin level of less than 10g/dL or a hematocrit level of less than 30% **AND** time since final dose of myelosuppressive chemotherapy is less than 8 weeks.

- Anemic HIV-infected patients on zidovudine therapy whose endogenous serum erythropoietin level is  $\leq 500$  mUnits/mL and whose zidovudine dose is  $\leq 4200$  mg per week.

**Physician must provide FCHP with the following:**

- Diagnosis
- Presenting symptoms (see symptoms of anemia)
- Dates and results of most recent hematocrit and hemoglobin
- Patient's current weight
- Route of administration
- Number of units needed to administer
- Expected duration of therapy
- For renal failure patients prior to therapy with erythropoietin, date and results of latest serum creatinine or estimated creatinine clearance obtained within the last month
- Lab tests showing transferrin saturation is at least 20%, serum ferritin is at least 100 ng/mL, and vitamin B12, folic acid, and iron levels are within normal limits
- Patients with symptomatic anemia due to a covered condition other than CRF and having hematocrit levels greater than 30% and hemoglobin levels greater than 10 g/dL must have supporting documentation in the medical record that provides evidence of the presence of significant comorbidity, such as severe COPD or cardiac disease, that warrants a need for higher hematocrit and hemoglobin levels.
- For patients with anemia as a result of MDS, date and results of the patient's diagnostic bone marrow biopsy and/or aspirate or date and results of the peripheral smear prior to initiation of ESA (erythropoietin-stimulating agents)
- For continued therapy, physician must maintain a log recording dates and results of hematocrit tests, iron studies, and EPO dosage changes.

**Not approved if:**

- Anemia in cancer treatment patients and HIV-infected patients due to folate deficiency, vitamin B-12 deficiency, iron deficiency, hemolysis, bleeding, bone marrow fibrosis or GI bleeding.
- Anemia associated with the treatment of AML (acute myelogenous leukemia), CML Chronic myelogenous leukemia), or erythroid cancers
- Anemia of cancer not related to the cancer treatment
- Anemia associated only with radiotherapy
- Anemia if patients have uncontrolled hypertension
- Prophylactic use to prevent chemotherapy-induced anemia
- Prophylactic use to reduce tumor hypoxia
- Patients with erythropoietin-type resistance due to neutralizing antibodies
- Baseline hemoglobin levels are higher than 10 g/dL (except in perisurgical patients whose pre-therapy levels may be as high as 13 g/dL, and who cannot or will not donate autologous blood)
- Asymptomatic or not transfusion-dependent

FCHP Pharmacy and Therapeutics Committee approval: \_\_\_\_\_

Date: \_\_\_\_\_

Adopted: 09/10/08

Revised: 12/1/08