Epogen Procrit

Description

Epogen / Procrit (epoetin alfa)

Background
Epogen and Procrit are erythropoiesis-stimulating agents (ESAs) that bind to progenitor stem cells and stimulates the production and differentiation of red blood cells (RBC) (1,2). Epogen stimulates erythropoiesis by the same mechanism as endogenous erythropoietin. Epogen increases the reticulocyte count within 10 days of initiation, followed by increases in the RBC count, hemoglobin, and hematocrit, usually within 2 to 6 weeks. The rate of hemoglobin increase varies among patients and is dependent upon the dose of Epogen administered (1-2).

Regulatory Status
FDA-approved indication: Epogen and Procrit are erythropoiesis-stimulating agents (ESA) indicated for: (1-2)
- Treatment of anemia due to
  - Chronic Kidney Disease (CKD) in patients on dialysis and not on dialysis.
  - Zidovudine in HIV-infected patients.
  - The effects of concomitant myelosuppressive chemotherapy, and upon initiation, there is a minimum of two additional months of planned chemotherapy.
- Reduction of allogeneic RBC transfusions in patients undergoing elective, non-cardiac, nonvascular surgery

Limitations of Use: (1-2)
Epogen and Procrit have not been shown to improve quality of life, fatigue, or patient wellbeing. Epogen and Procrit are not indicated for use:
• In patients with cancer receiving hormonal agents, biologic products, or radiotherapy, unless also receiving concomitant myelosuppressive chemotherapy.
• In patients with cancer receiving myelosuppressive chemotherapy when the anticipated outcome is cure.
• In patients scheduled for surgery who are willing to donate autologous blood.
• In patients undergoing cardiac or vascular surgery.
• As a substitute for RBC transfusions in patients who require immediate correction of anemia.

Myelodysplastic syndromes (MDS) encompass a series of hematological conditions characterized by chronic cytopenias, including anemia, accompanied by abnormal cellular maturation. As a result, patients with MDS are at risk for symptomatic anemia. At least 80 percent of patients are anemic at the time of diagnosis, while about 50 percent have a hemoglobin level less than 10 g/dL. The use of epoetin alfa for the treatment of symptomatic anemia in patients with MDS is an unlabeled or investigational use according to the FDA. However, their use in MDS is supported by the American Society of Hematology (ASH), the American Society of Clinical Oncology (ASCO), and the National Comprehensive Cancer Network (NCCN) (3-5).

Anemia associated with Hepatitis C therapy is a frequent cause of dose reduction or discontinuation of therapy. Clinical recommendation is to reduce the dosage if anemia developed. This reduction increases the likelihood of treatment failure. Addition of an ESA agent allows the optimal probability of treatment success (6).

The National Kidney Foundation Kidney Disease Outcomes Quality Initiative (NKF KDOQI) provides evidence based clinical guidelines for improving treatment and outcomes in patients with kidney disease. Their recommendations for transferrin saturation, serum ferritin and hemoglobin levels establish a standard of care and are incorporated into this criterion (7). Treatment of anemia associated with rheumatoid arthritis has been shown to reduce disease activity (8).

Related policies
Aranesp
Policy
This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Epogen and Procrit may be considered medically necessary for the treatment of anemia associated with chronic renal failure and serum ferritin is greater than or equal to 100ng/ml; in
patients who have one of the following: not on dialysis with initial treatment with hemoglobin less than 10 g/dl, or continuing treatment with hemoglobin less than or equal to 10 g/dl or if patient is on dialysis the initial treatment with hemoglobin less than 10 g/dl, or continuing treatment with hemoglobin less than or equal to 11 g/dl (if the hemoglobin level exceed this level then the prescribing physician must confirm that the dose will be held or reduced until the hemoglobin level returns to the required level). For the treatment of anemia secondary to chemotherapy with patients receiving concomitant myelosuppressive therapy and the anticipated outcome of therapy is not cure of cancer, a minimum of two additional months of planned chemotherapy, and must discontinue use of agent upon completion of chemotherapy. For the treatment of anemia in patients who are scheduled to undergo elective, non-cardiac, nonvascular surgery and hemoglobin greater than 10 and less than or equal to 13 g/dl. For the treatment of myelodysplastic syndrome, allogenic bone marrow transplantation, anemia secondary to zidovudine therapy-treated human immunodeficiency virus (HIV) patients, anemia associated with hepatitis C (HCV) treatment, and anemia associated with rheumatoid arthritis/rheumatic disease.

Epogen and Procrit may be considered **investigational** for all other indications.

**Prior-Approval Requirements**

**Diagnoses**

Patient must have **ONE** of the following:

1. Anemia associated with chronic renal failure
   a. Serum ferritin \( \geq 100 \, \text{ng/ml} \)

AND **ONE** of the following:

*If patient is **NOT** on dialysis*

a. Initial treatment: Hemoglobin < 10 g/dl*

b. Continuing treatment: Hemoglobin \( \leq 10 \, \text{g/dl} \)*

*If patient is **ON** dialysis*

a. Initial treatment: Hemoglobin < 10 g/dl*

b. Continuing treatment: Hemoglobin \( \leq 11 \, \text{g/dl} \)*

* if the hemoglobin level exceeds this level then the prescribing physician must confirm that the dose will be held or reduced until the hemoglobin level returns to the required level.
2. Anemia secondary to chemotherapy
   a. Concomitant myelosuppressive therapy and the anticipated outcome of therapy is NOT cure of cancer
   b. There is a minimum of two additional months of planned chemotherapy
   c. Must discontinue use of agent upon completion of the chemotherapy

3. Myelodysplastic syndrome
4. Allogenic bone marrow transplantation
5. Anemia secondary to zidovudine-treated Human Immunodeficiency Virus (HIV) patients
6. Anemia in patients scheduled to undergo elective, non-cardiac, nonvascular surgery
   a. Hemoglobin >10 and ≤ 13 g/dl

7. Anemia associated with Hepatitis C (HCV) treatment
8. Anemia associated with rheumatoid arthritis (RA)/ rheumatic disease

Prior – Approval **Renewal Requirements**
Same as above

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None

**Prior - Approval Limits**
Duration  6 months

**Prior – Approval **Renewal Limits**
Duration  6 months

**Rationale**

Summary
Epogen and Procrit are erythropoiesis-stimulating agents (ESAs) that bind to progenitor stem cells and stimulates the production and differentiation of red blood cells (RBC). Epogen stimulates erythropoiesis by the same mechanism as endogenous erythropoietin (1-2).

Prior approval is required to ensure the safe, clinically appropriate and cost effective use of Epogen and Procrit while maintaining optimal therapeutic outcomes.

References

Policy History

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<td>September 2008</td>
<td>FDA labeling revisions with new indications:</td>
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<tr>
<td>Epogen / Procrit / Aranesp</td>
<td>Treatment of Anemia of Chronic Renal Failure Patients</td>
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<td>Treatment of Anemia in Zidovudine-treated HIV-infected Patients</td>
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<td>Treatment of Anemia due to concomitant myelosuppressive chemotherapy- no longer indicated when the anticipated outcome is cure.</td>
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<td>Reduction of Allogenic Blood Transfusion in Surgery patients</td>
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The August 2008 FDA package insert revisions were two-fold. The first
revision was to limit use of any ESA products to patients whom hemoglobin levels are less than 10g/dl. The second revision was to remove the indication for ESA therapy for patients receiving myelosuppressive therapy when the anticipated outcome is cure.

Prior to initiation of therapy, the patient’s iron stores should be evaluated. Transferrin saturation should be at least 20% and ferritin at least 100 ng/mL. Individual titration in patients with chronic renal failure should be done to achieve and maintain hemoglobin levels between 10 to 12 g/dL. Procrit and Epogen are indicated for the treatment of anemic patients with hemoglobin levels > 10 to ≤ 13 g/dl who are at risk for perioperative blood loss from elective, noncardiac, nonvascular surgery to reduce the need for allogenic blood transfusions (1).

October 2008 Allowing PA approval for hemoglobin levels outside the recommended levels if the AP confirms that the dose will be held until hemoglobin levels fall within acceptable range will allow for safe use of the medication while making it available for the patient as soon as clinically appropriate.

September 2011 Separation of Aranesp from the other ESAs’ criteria due to differing U.S. Food and Drug administration (FDA) approved indications.

December 2011 Annual review and update

June 2012 Add “or reduced,” to "if the hemoglobin level exceeds this level then the prescribing physician must confirm that the dose will be held or reduced until the hemoglobin level returns to the required level.

December 2012 Annual review and update

March 2014 Annual review and update.

Removal of TSAT level requirement

December 2015 Modified use with chemotherapy to reflect package insert

Annual editorial review and reference update

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on December 3, 2015 and is effective January 1, 2016.

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