UTILIZATION MANAGEMENT MEDICAL POLICY

POLICY: Erythropoiesis-Stimulating Agents – Epoetin Alfa Products Utilization Management Medical Policy

- Epogen® (epoetin alfa intravenous or subcutaneous injection − Amgen)
- Procrit® (epoetin alfa intravenous or subcutaneous injection – Janssen)
- Retacrit® (epoetin alfa-epbx intravenous or subcutaneous injection – Pfizer)

REVIEW DATE: 07/08/2026

OVERVIEW

Epoetin alfa (Epogen, Procrit, Retacrit), an erythropoiesis-stimulating agent (ESA), is indicated for the following uses:[1-3]

- **Anemia due to chronic kidney disease** (CKD), including patients on dialysis and patients not on dialysis to decrease the need for red blood cell (RBC) transfusions.
- **Anemia due to chemotherapy in patients with cancer**, in patients with non-myeloid malignancies where anemia is due to the effect of concomitant myelosuppressive chemotherapy, and upon initiation, there is a minimum of two additional months of planned chemotherapy.
- **Anemia due to zidovudine**, in patients with human immunodeficiency virus (HIV) infection.
- **Reduction of allogeneic RBC transfusions**, in patients with perioperative hemoglobin (Hb) > 10.0 to ≤ 13.0 g/dL who are at high risk for perioperative blood loss from elective, noncardiac, nonvascular surgery.

Retacrit is a biosimilar to Epogen/Procrit.[3]

Limitations of Use: Epoetin alfa has not been shown to improve quality of life, fatigue, or patient well-being.[1-3] Epoetin alfa is not indicated for the following uses:

- Patients with cancer receiving hormonal agents, biologic products, or radiotherapy unless also receiving concomitant myelosuppressive chemotherapy.
- Patients with cancer receiving myelosuppressive chemotherapy when the anticipated outcome is cure.
- Patients with cancer receiving myelosuppressive chemotherapy in whom anemia can be managed by transfusion.
- Patients scheduled for surgery who are willing to donate autologous blood.
- Patients undergoing cardiac or vascular surgery.
- As a substitute for RBC transfusions in those who require immediate correction of anemia.

The iron status should be evaluated in all patients before and during treatment with ESAs.[1-3] Therapy should be initiated for **adults with CKD on dialysis** when the Hb level is < 10.0 g/dL and if the Hb level approaches or exceeds 11.0 g/dL, reduce or interrupt the dose of epoetin alfa. For **adults with CKD who are not on dialysis**, consider initiating epoetin alfa only when the Hb is < 10.0 g/dL and other considerations apply (e.g., rate of Hb decline indicates patient is likely to need RBC transfusion and reducing the risk of alloimmunization and/or other RBC transfusion-related risks is a goal). If the Hb exceeds 10.0 g/dL, reduce or interrupt the epoetin alfa dose and use the lowest dose sufficient to reduce the need for RBC transfusions. For **pediatric patients with CKD**, initiate epoetin alfa when the Hb < 10.0 g/dL and if the Hb level approaches 12.0 g/dL, reduce or interrupt the dose of epoetin alfa. Initiate epoetin alfa for **patients on cancer chemotherapy** only if the Hb is < 10.0 g/dL. Epoetin alfa is indicated for the treatment of **anemia due to zidovudine** given at ≤ 4,200 mg per week in HIV-infected patients with

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endogenous serum erythropoietin levels of ≤ 500 mU/mL. It is recommended to withhold epoetin alfa if Hb exceeds 12.0 g/dL. Data show that epoetin alfa elevated or maintained Hb and/or hematocrit and decreased transfusions in anemic patients (Hb < 10.0 g/dL) who were receiving zidovudine. Patients with baseline endogenous serum erythropoietin levels ≤ 500 mU/mL derived greater benefit with epoetin alfa (e.g., achievement of higher hematocrit, reduction in transfusion requirements) compared with those having levels greater than this threshold.

Dosing Information

Doses of epoetin alfa are titrated based on hemoglobin values. Refer to the prescribing information regarding increasing, reducing, interrupting, or conversion dosing. Use the lowest dose sufficient to reduce the need for RBC transfusions.

Guidelines

The Kidney Disease Improving Global Outcomes (KDIGO) clinical practice guidelines for anemia in CKD (2026) provide recommendations for the use of ESAs.[2] Guidelines recommend addressing all correctable causes of anemia (i.e. iron deficiency, malignancy, infection, etc.) before initiating treatment with an ESA or hypoxia-inducible factor-prolyl hydroxylase inhibitor (HIF-PHI). After all correctable causes of anemia are addressed, KDIGO suggests using ESAs as first-line therapy for treating anemia in patients with CKD rather than HIF-PHIs. Although clinical trials have revealed noninferiority of HIF-PHIs versus ESAs for efficacy as treatment for anemia, some studies suggested a higher risk of major adverse cardiovascular events with HIF-PHIs compared to ESAs in at least some CKD populations. For patients with CKD on dialysis, the guidelines recommend ESA therapy should be initiated when the Hb level is ≤ 9.0 to 10.0 g/dL. For patients with CKD who are not on dialysis, the decision to initiate ESA therapy should be individualized based on many factors (e.g., rate of Hb decline, prior response to iron therapy, transfusion risk, patient symptoms). In adults with anemia and CKD who are being treated with an ESA, ESA therapy should not be used to maintain Hb concentrations above 11.5 g/dL. For pediatric patients with anemia and CKD, the selection of an Hb target for ESA maintenance therapy should be individualized considering potential benefits and harms. Baseline and periodic monitoring (e.g., iron, total iron-binding capacity, transferrin saturation, or ferritin levels) and instituting iron replacement when needed may be useful in limiting the need for ESAs, maximizing symptomatic improvement in patients, and determining the reason for inadequate response to ESAs. Iron deficiency can occur following continued ESA use. Therefore, ongoing iron supplementation is often required in most patients to maintain an optimal response.

Epoetin alfa is recommended in guidelines from the National Comprehensive Cancer Network (NCCN):

- **Hematopoietic Growth Factors:** NCCN guidelines (version 3.2026 – December 5, 2025) indicate Aranesp and epoetin alfa with or without iron supplementation may be warranted for the long-term management of anemia in high-risk patients or in asymptomatic patients with comorbidities receiving myelosuppressive chemotherapy where are cure is not anticipated.[5]
- **Myelodysplastic Syndrome (MDS):** NCCN guidelines (version 3.2026 – January 12, 2026) list Aranesp and epoetin alfa products as having utility in anemic, symptomatic patients with MDS if serum erythropoietin levels are ≤ 500 mU/mL.[6] Iron stores should be adequate. Due to safety issues, the guidelines suggest that ESAs be used in the management of symptomatic anemia in patients with MDS and to aim for a target Hb range of 10 to 12.0 g/dL but not to exceed 12.0 g/dL.
- **Myeloproliferative Neoplasms:** The NCCN guidelines (version 2.2026 – June 16, 2026) address Aranesp and epoetin alfa products as options for treatment of patients with anemia related to myelofibrosis having a serum erythropoietin level < 500 mU/mL.[7] Iron stores should be adequate. The guidelines also advise that ESAs are generally less effective for the management of transfusion-dependent anemia.

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Safety

ESAs carry a boxed warning for increased risk of death, myocardial infarction, stroke, venous thromboembolism, thrombosis of vascular access, and tumor progression or recurrence.[1-3] These risks are greater when targeting higher hemoglobin levels.

POLICY STATEMENT

Prior Authorization is recommended for medical benefit coverage of epoetin alfa products in patients with conditions other than CKD who are on dialysis. The intent of this policy is to provide recommendations for uses other than anemia in patients with CKD who are on dialysis. Approval is recommended for those who meet the **Criteria** and **Dosing** for the listed indications. Extended approvals are allowed if the patient continues to meet the Criteria and Dosing. Requests for doses outside of the established dosing documented in this policy will be considered on a case-by-case basis by a clinician (i.e., Medical Director or Pharmacist). All approvals are provided for the duration noted below. In cases where the approval is authorized in months, 1 month is equal to 30 days. Because of the specialized skills required for evaluation and diagnosis of patients treated with epoetin alfa as well as the monitoring required for adverse events and long-term efficacy, approval requires epoetin alfa to be prescribed by or in consultation with a physician who specializes in the condition being treated in some circumstances.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of epoetin alfa is recommended in those who meet one of the following criteria:

FDA-Approved Indications

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1. **Anemia in a Patient with Chronic Kidney Disease who is on Dialysis.** Approve for 3 years.

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2. **Anemia in a Patient with Chronic Kidney Disease who is not on Dialysis.** Approve for 1 year if the patient meets ONE of the following (A or B):
   - **A)** Initial Therapy. Approve if the patient meets BOTH of the following (i and ii):
     - **i.** Patient meets ONE of the following (a or b):
       - **a)** Patient is ≥ 18 years of age with a hemoglobin < 10.0 g/dL; OR
       - **b)** Patient is < 18 years of age with a hemoglobin ≤ 11.0 g/dL; AND
     - **ii.** Patient meets ONE of the following (a or b):
       - **a)** Patient is currently receiving iron therapy; OR
       - **b)** Patient has adequate iron stores according to the prescriber; OR
   - **B)** Patient is Currently Receiving an Erythropoiesis-Stimulating Agent. Approve if the patient meets BOTH of the following (i and ii):
     Note: Examples of erythropoiesis-stimulating agents include an epoetin alfa product (e.g., Epogen, Procrit, Retacrit), a darbepoetin alfa product (e.g., Aranesp), or a methoxy polyethylene glycol-epoetin beta product (e.g., Mircera).
     - **i.** Patient has a hemoglobin ≤ 12.0 g/dL; AND
     - **ii.** Patient meets ONE of the following (a or b):
       - **a)** Patient is currently receiving iron therapy; OR
       - **b)** Patient has adequate iron stores according to the prescriber.

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Dosing. Approve if the doses are equivalent to ≤ 60,000 units total per month.

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3. Anemia in a Patient with Cancer due to Cancer Chemotherapy. Approve for 6 months if the patient meets ONE of the following (A or B):

A) Initial Therapy. Approve if the patient meets ALL of the following (i, ii, and iii):
- **i.** Patient has a hemoglobin < 10.0 g/dL; AND
- **ii.** Patient meets BOTH of the following (a and b):
  - **a)** Patient is currently receiving myelosuppressive chemotherapy; AND
  - **b)** According to the prescriber, myelosuppressive chemotherapy is considered non-curative; AND
- **iii.** Patient meets ONE of the following (a or b):
  - **a)** Patient is currently receiving iron therapy; OR
  - **b)** Patient has adequate iron stores according to the prescriber; OR

B) Patient is Currently Receiving an Erythropoiesis-Stimulating Agent. Approve if the patient meets ALL of the following (i, ii, and iii):
Note: Examples of erythropoiesis-stimulating agents include an epoetin alfa product (e.g., Epogen, Procrit, Retacrit) or a darbepoetin alfa product (e.g., Aranesp).
- **i.** Patient has a hemoglobin ≤ 12.0 g/dL; AND
- **ii.** Patient meets BOTH of the following (a and b):
  - **a)** Patient is currently receiving myelosuppressive chemotherapy; AND
  - **b)** According to the prescriber, myelosuppressive chemotherapy is considered non-curative; AND
- **iii.** Patient meets ONE of the following (a or b):
  - **a)** Patient is currently receiving iron therapy; OR
  - **b)** Patient has adequate iron stores according to the prescriber.

Dosing. Approve ONE of the following dosing regimens (A or B):

A) Patient is ≥ 18 years of age. Approve if the dose meets BOTH of the following (i and ii):
- **i.** Each dose is ≤ 300 Units/kg; AND
- **ii.** Each dose is given no more frequently than 3 times a week; OR

B) Patient is < 18 years of age. Approve if the dose meets ALL of the following (i, ii, and iii):
- **i.** Each dose is ≤ 900 Units/kg; AND
- **ii.** Each dose is ≤ 60,000 Units (Maximum Dose); AND
- **iii.** Each dose is given no more frequently than once weekly.

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4. Anemia in a Patient with Human Immunodeficiency Virus who is Receiving Zidovudine. Approve for 1 year if the patient meets ONE of the following (A or B):

A) Initial Therapy. Approve if the patient meets ALL of the following (i, ii, and iii):
- **i.** Patient meets ONE of the following (a or b):
  - **a)** Patient has a hemoglobin < 10.0 g/dL; OR
  - **b)** Patient has a serum erythropoietin level ≤ 500 mU/mL; AND
- **ii.** Patient is currently receiving zidovudine therapy; AND
- **iii.** Patient meets ONE of the following (a or b):
  - **a)** Patient is currently receiving iron therapy; OR
  - **b)** Patient has adequate iron stores according to the prescriber; OR

B) Patient is Currently Receiving an Erythropoiesis-Stimulating Agent. Approve if the patient meets ALL of the following (i, ii, and iii):

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Note: Examples of erythropoiesis-stimulating agents include an epoetin alfa product (e.g., Epogen, Procrit, Retacrit) or darbepoetin alfa product (e.g., Aranesp).
- **i.** Patient has a hemoglobin ≤ 12.0 g/dL; AND
- **ii.** Patient is currently receiving zidovudine therapy; AND
- **iii.** Patient meets ONE of the following (a or b):
  - **a)** Patient is currently receiving iron therapy; OR
  - **b)** Patient has adequate iron stores according to the prescriber.

Dosing. Approve ONE of the following dosing regimens (A or B):
- **A)** Patient is ≥ 18 years of age. Approve if the dose meets BOTH of the following (i and ii):
  - **i.** Each dose is ≤ 300 Units/kg; AND
  - **ii.** Each dose is given no more frequently than 3 times per week; OR
- **B)** Patient is < 18 years of age. Approve if the dose meets BOTH of the following (i and ii):
  - **i.** Each dose is ≤ 400 Units/kg; AND
  - **ii.** Each dose is given no more frequently than 3 times per week.

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5. **Reduction of Allogeneic Red Blood Cell Transfusions in a Patient Undergoing Surgery.** Approve for 1 month if the patient meets ALL of the following (A, B, C, and D):
   - **A)** Hemoglobin is ≤ 13.0 g/dL; AND
   - **B)** The surgery is elective, nonvascular, and noncardiac; AND
   - **C)** Patient is not willing or able to donate autologous blood prior to surgery; AND
   - **D)** Patient meets ONE of the following (i or ii):
     - **i.** Patient is currently receiving iron therapy; OR
     - **ii.** Patient has adequate iron stores according to the prescriber.

   Dosing. Approve ONE of the following dosing regimens (A or B):
   - **A)** Approve if the dose meets BOTH of the following (i and ii):
     - **i.** Each dose is ≤ 300 Units/kg per day; AND
     - **ii.** The total amount of doses is ≤ 15 doses; OR
   - **B)** Approve if the dose meets BOTH of the following (i and ii):
     - **i.** Each dose is ≤ 600 Units/kg per day; AND
     - **ii.** The total amount of doses is ≤ 4 doses.

Other Uses with Supportive Evidence

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6. **Anemia Associated with Myelodysplastic Syndrome.** Approve for 1 year if the patient meets ONE of the following (A or B):
   - **A)** Initial Therapy. Approve if the patient meets ALL of the following (i, ii, iii, and iv):
     - **i.** Patient is ≥ 18 years of age; AND
     - **ii.** Patient meets ONE of the following (a or b):
       - **a)** Patient has a hemoglobin < 10.0 g/dL; OR
       - **b)** Patient has a serum erythropoietin level ≤ 500 mU/mL; AND
     - **iii.** Patient meets ONE of the following (a or b):
       - **a)** Patient is currently receiving iron therapy; OR
       - **b)** Patient has adequate iron stores according to the prescriber; AND
     - **iv.** The medication is prescribed by or in consultation with a hematologist or oncologist.
   - **B)** Patient is Currently Receiving an Erythropoiesis-Stimulating Agent. Approve if the patient meets ALL of the following (i, ii, iii, and iv):

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Note: Examples of erythropoiesis-stimulating agents include an epoetin alfa product (e.g., Epogen, Procrit, Retacrit) or a darbepoetin alfa product (e.g., Aranesp).

i. Patient is ≥ 18 years of age; AND
ii. Patient has a hemoglobin ≤ 12.0 g/dL; AND
iii. Patient meets ONE of the following (a or b):
  a) Patient is currently receiving iron therapy; OR
  b) Patient has adequate iron stores according to the prescriber; AND
iv. The medication is prescribed by or in consultation with a hematologist or oncologist.

Dosing. Approve if the dose meets BOTH of the following (A and B):
A) Each dose is ≤ 60,000 Units; AND
B) Each dose is given no more frequently than 2 times a week.

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7. Anemia Associated with Myelofibrosis. Approve for the duration noted below if the patient meets ONE of the following (A or B):

A) Initial Therapy. Approve for 3 months if the patient meets ALL of the following (i, ii, and iii):
  i. Patient meets ONE of the following (a or b):
    a) Patient has a hemoglobin < 10.0 g/dL; OR
    b) Patient has a serum erythropoietin level ≤ 500 mU/mL; AND
  ii. Patient meets ONE of the following (a or b):
    a) Patient is currently receiving iron therapy; OR
    b) Patient has adequate iron stores according to the prescriber; AND
  iii. The medication is prescribed by or in consultation with a hematologist or oncologist.

B) Patient is Currently Receiving an Erythropoiesis-Stimulating Agent. Approve for 1 year if the patient meets ALL of the following (i, ii, iii, and iv):
  Note: Examples of erythropoiesis-stimulating agents include an epoetin alfa product (e.g., Epogen, Procrit, Retacrit) or a darbepoetin alfa product (e.g., Aranesp).
  i. Patient has a hemoglobin ≤ 12.0 g/dL; AND
  ii. Patient meets ONE of the following (a or b):
    a) Patient is currently receiving iron therapy; OR
    b) Patient has adequate iron stores according to the prescriber; AND
  iii. According to the prescriber, patient has responded to therapy defined as hemoglobin ≥ 10 g/dL or a hemoglobin increase of ≥ 2 g/dL; AND
  iv. The medication is prescribed by or in consultation with a hematologist or oncologist.

Dosing. Approve if the dose meets BOTH of the following (A and B):
A) Each dose is ≤ 60,000 Units; AND
B) Each dose is given no more frequently than once every 2 weeks.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Epoetin alfa is not recommended in the following situations:

1. Anemia Associated with Cancer in a Patient not Receiving Myelosuppressive Cancer Chemotherapy. Epoetin alfa is not indicated in patients with cancer who are not receiving cancer chemotherapy.[1-3]

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2. **Anemia Associated with Acute Myelogenous Leukemias (AML), Chronic Myelogenous Leukemias (CML), or other Myeloid Cancers.** Epoetin alfa is indicated for use in non-myeloid cancers. AML and CML are examples of myeloid cancers.[1-3]

3. **Anemia Associated with Radiotherapy in Cancer.** Epoetin alfa is not indicated for use in patients with cancer who are given only radiation therapy.[1-3]

4. **To Enhance Athletic Performance.** Epoetin alfa is not recommended for approval because this indication is excluded from coverage in a typical pharmacy benefit.

5. **Anemia due to Acute Blood Loss.** Use of epoetin alfa is not appropriate in these types of situations.

6. **Non-Anemic Patient (Hemoglobin > 13.0 g/dL) Prior to Surgery.** Although studies have been conducted that involved non-anemic patients undergoing various surgeries receiving epoetin alfa preoperatively and sometimes postoperatively to prevent transfusions or subsequent anemia, the overall benefit of this therapy in those with relatively normal preoperative Hb level is questionable.

7. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

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5. The NCCN Hematopoietic Growth Factors Clinical Practice Guidelines in Oncology (version 3.2026 – December 5, 2025). © 2026 National Comprehensive Cancer Network. Available at: http://www.nccn.org. Accessed on June 22, 2026.
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HISTORY

Type of Revision	Summary of Changes	Review Date
Annual Revision	No criteria changes.	07/17/2024
Annual Revision	No criteria changes.	07/16/2025
Annual Revision	No criteria changes.	07/08/2026

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