	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	КҮ	MD	NJ	NV	NY	TN	TX	WA
Applicable	Χ	Х	NA	NA	Χ	NA	Х	Х	Х	Х	Х	NA	NA	NA

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Erythropoiesis Stimulating Agents (ESAs)

CG-DRUG-05

Override(s)	Approval Duration
Prior Authorization	Initial therapy: 2 months (8 weeks)***
	Continued therapy: 2 months (8 weeks)***
	***Requests will NOT be approved for longer
	than 2 months (8 weeks) at a time.

APPROVAL CRITERIA

Requests for Procrit (epoetin alfa), Epogen (epoetin alfa), or Retacrit (epoetin alfa-epbx) may be approved when the following criteria are met:

- I. The individual has a hemoglobin (Hgb) levels less than 10 g/dL, prior to initiation of therapy; **AND**
- II. Prior to initiation of therapy, evaluation of the individual's iron status reveals:
 - A. Transferrin saturation is at least 20%; or
 - B. Ferritin is at least 80 ng/mL; or
 - C. Bone marrow demonstrates adequate iron stores; **AND**
- III. For individuals with hypertension, blood pressure is adequately controlled before initiation of therapy and closely monitored and controlled during therapy; **AND**
- IV. The individual meets as least one of the following:
 - A. Anemia associated with chronic kidney disease (CKD), for individuals on dialysis, to achieve and maintain hemoglobin levels within the range of 10 to 11 g/dL; **OR**
 - B. Anemia associated with chronic kidney disease (CKD) for individuals <u>not</u> on dialysis, to achieve and maintain hemoglobin levels of 10g/dl; **OR**
 - C. Cancer chemotherapy known to produce anemia (myelosuppressive) when **all** of the following are met:
 - 1. Chemotherapy is planned for a minimum of 2 months; AND
 - 2. The individual has a diagnosis of non-myeloid cancer and the anticipated outcome is not cure; **OR**
 - D. Myelodysplastic syndrome with an endogenous erythropoietin level less than 500

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	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	КҮ	MD	NJ	NV	NY	TN	TX	WA
Applicable	Х	Х	NA	NA	Х	NA	Х	Х	Х	Х	Х	NA	NA	NA

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mU/mL; OR

- E. Zidovudine in human immunodeficiency virus (HIV)-infected individuals when the endogenous serum erythropoietin level is less than or equal to 500 mUnits/mL and when the dose of Zidovudine is less than or equal to 4200 mg/week; **OR**
- F. Hepatitis C virus infection in individuals who are being concomitantly treated with the combination of ribavirin and interferon alfa, or ribavirin and peginterferon alfa; **OR**
- G. Myelosuppressive drugs (for example, disease modifying anti-rheumatic drugs) known to produce anemia in individuals with a diagnosis of a chronic inflammatory disease; **OR**
- H. Allogeneic Bone Marrow Transplantation.

Requests for Procrit (epoetin alfa), Epogen (epoetin alfa), or Retacrit (epoetin alfa-epbx) may also be approved when the criteria following are met:

- I. Elective, non-cardiac, non-vascular surgery to reduce the need for allogeneic blood transfusion when the individual meets **all** of the following criteria:
 - A. Individual's hemoglobin levels are greater than 10 to less than or equal to 13 g/dL; AND
 - B. Individual is at high risk for perioperative transfusions with significant, anticipated blood loss: **AND**
 - C. Individual is unable or unwilling to donate autologous blood; AND
 - D. Antithrombotic prophylaxis has been considered; AND
 - E. Prior to initiation of therapy, evaluation of the individual's iron status reveals:
 - Transferrin saturation is at least 20%; or
 - ii. Ferritin is at least 80 ng/mL; or
 - iii. Bone marrow demonstrates adequate iron stores; AND
 - F. For individuals with hypertension, blood pressure is adequately controlled before initiation of therapy and closely monitored and controlled during therapy.

Continued use of epoetin alfa or epoetin alfa-epbx may only be approved beyond 8 weeks if the hemoglobin does not exceed 11 g/dL AND iron stores (including transferrin saturation and ferritin) are adequately maintained and monitored periodically during therapy;

Requests for Procrit (epoetin alfa), Epogen (epoetin alfa), or Retacrit (epoetin alfa-epbx) may **not** be approved for all of the following:

- I. When above criteria are not met;
- II. To treat anemia in any indication not listed above, including but not limited to anemia of prematurity;

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	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	КҮ	MD	NJ	NV	NY	TN	TX	WA
Applicable	Х	Х	NA	NA	Х	NA	Х	Х	Х	Х	Х	NA	NA	NA

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- III. Continued use when the hemoglobin level exceeds 11 g/dL unless otherwise specified above (except when the dose of epoetin alfa is adjusted to achieve and maintain target hemoglobin not to exceed 11 g/dL);
- IV. Use beyond 12 weeks in the absence of response in individuals with chronic kidney disease;
- V. Use beyond 8 weeks in the absence of response in individuals with myelodysplastic syndrome (MDS);
- VI. Use beyond 8-9 weeks in the absence of response or if transfusions are still required in individuals with metastatic, non-myeloid cancer being treated with myelosuppressive chemotherapy agents known to produce anemia;
- VII. To treat anemia in individuals due to other factors such as iron deficiency, folate deficiency or B12 deficiency, hemolysis, gastrointestinal bleeding, other active or occult bleeding, or underlying hematologic diseases (such as sickle cell anemia, thalassemia, and porphyria);
- VIII. As a treatment in the presence of sudden loss of response with severe anemia and low reticulocyte count;
 - IX. To treat anemia in individuals with cancer receiving hormonal agents, therapeutic biologic products, or radiotherapy unless receiving concomitant myelosuppressive chemotherapy;
 - X. To treat anemia in individuals with cancer receiving myelosuppressive chemotherapy when the anticipated outcome is cure;
 - XI. To treat anemia in individuals with cancer receiving myelosuppressive chemotherapy in whom the anemia can be managed by transfusion;
- XII. Continued use beyond 6 weeks after therapy with myelosuppressive chemotherapy known to produce anemia is completed;
- XIII. Pre-operative use for individuals who are willing to donate autologous blood.

Note: Erythropoiesis-stimulating agents (ESAs) have black box warnings related to the increased risk of death, myocardial infarction, stroke, venous thromboembolism, thrombosis of vascular access, and tumor progression or recurrence. Individuals with chronic kidney disease (CKD) are at a greater risk for death, serious adverse cardiovascular reactions, and stroke when administered ESAs to target hemoglobin (Hgb) levels greater than 11 g/dL in clinical studies. No trial has identified a target Hgb level, ESA dose, or dosing strategy that does not increase these risks. Use of ESAs in individuals with certain tumor types (i.e., breast, non-small cell lung, head and neck, lymphoid, cervical), shortened overall survival and/or increased the risk of tumor progression or recurrence in some clinical studies. Recommended to use the lowest ESA dose needed to avoid RBC transfusions and serious cardiovascular and thromboembolic reactions. ESAs should only be used for treatment of anemia due to concomitant myelosuppressive chemotherapy, and discontinue following the completion of a chemotherapy course. Individuals receiving myelosuppressive chemotherapy should not be treated with ESAs when the anticipated outcome is cure. Deep venous thrombosis prophylaxis should be considered when epoetin alfa is used perisurgically. Prescribers and hospitals must enroll in and comply with the

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	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	КҮ	MD	NJ	NV	NY	TN	TX	WA
Applicable	Χ	Χ	NA	NA	Х	NA	Х	Х	Х	Х	Х	NA	NA	NA

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ESA APPRISE Oncology Program to prescribe and/or dispense epoetin alfa to individuals with cancer.

State Specific Mandates											
State name	Date effective	Mandate details (including specific bill if applicable)									
N/A	N/A	N/A									

Key References:

- 1. Aher SM, Ohlsson A. Early versus late erythropoietin for preventing red blood cell transfusion in preterm and/or low birth weight infants. Cochrane Database Syst Rev. 2006;(3):CD004865.
- 2. Aher SM, Ohlsson A. Late erythropoietin for preventing red blood cell transfusion in preterm and/or low birth weight infants. Cochrane Database Syst Rev. 2006;(3):CD004868.
- 3. Aranesp [Product Information], Thousand Oaks, CA. Amgen; Updated on April 2017. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/103951s5375lbl.pdf. Accessed on September 20, 2017 .
- 4. Bath PM, Sprigg N, England T. Colony stimulating factors (including erythropoietin, granulocyte colony stimulating factor and analogues) for stroke. Cochrane Database Syst Rev. 2013;(6):CD005207.
- 5. Bohlius J, Schmidlin K, Brillant C, et al. Erythropoietin or darbepoetin for patients with cancer meta-analysis based on individual patient data. Cochrane Database Syst Rev. 2009;(3):CD007303.
- 6. Bohlius J, Langensiepen S, Schwarzer G, et al. Erythropoietin for patients with malignant disease. Cochrane Database Syst Rev. 2004;(3):CD003407.
- 7. Centers for Medicare and Medicaid Services. National Coverage Determination: Erythropoiesis stimulating agents (ESAs) in cancer and related neoplastic conditions. NCD #110.21. Effective July 30, 2007. Available at: http://www.cms.hhs.gov/mcd/index_list.asp?list_type=ncd. Accessed on September 20, 2017.
- 8. Cody JD, Daly C, Campbell MK, et al. Recombinant human erythropoietin for chronic renal failure anaemia in pre-dialysis patients. Cochrane Database Syst Rev. 2001;(4):CD003266.
- 9. Cody JD, Daly C, Campbell MK, et al. Frequency of administration of recombinant human erythropoietin for anaemia of end stage renal disease in dialysis patients. Cochrane Database Syst Rev. 2002;(2):CD003895.
- 10. Darbepoetin Alfa. In: DrugPoints® System (electronic version). Truven Health Analytics, Greenwood Village, CO. Updated May 26, 2015. Available at: http://www.micromedexsolutions.com. Accessed on September 20, 2017.
- 11. Darbepoetin Monograph. Lexicomp[®] Online, American Hospital Formulary Service[®] (AHFS[®]) Online, Hudson, Ohio, Lexi-Comp., Inc. Last revised March 19, 2015. Accessed on September 20, 2017.
- 12. Epoetin Alfa. In: DrugPoints System (electronic version). Truven Health Analytics, Greenwood Village, CO. Updated August 12, 2014. Available at: http://www.micromedexsolutions.com. Accessed on September 20, 2017.
- 13. Epoetin Alfa Monograph. Lexicomp[®] Online, American Hospital Formulary Service[®] (AHFS[®]) Online, Hudson, Ohio, Lexi-Comp., Inc. Last revised August 22, 2014. Accessed on September 20, 2017.
- 14. Epogen [Product Information], Thousand Oaks, CA. Amgen; Updated April 2017. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/103234s5360s5364lbl.pdf. Accessed on September 20, 2017.
- 15. Ghany MG, Nelson DR, Strader DR, et al. An update on treatment of genotype 1 chronic hepatitis C virus infection: 2011 practice guideline by the American Association for the Study of Liver Diseases. Hepatol. 2011; 54(4):1433-1444.

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	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	КҮ	MD	NJ	NV	NY	TN	TX	WA
Applicable	Х	Х	NA	NA	Х	NA	Х	Х	Х	Х	Х	NA	NA	NA

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- 16. Grant MD, Piper M, Bohlius J, et al. Epoetin and darbepoetin for managing anemia in patients undergoing cancer treatment: comparative effectiveness update. Comparative Effectiveness Review No. 113. (Prepared by the Blue Cross and Blue Shield Association Technology Evaluation Center Evidence-based Practice Center under Contract No. 290-2007-10058-I.) AHRQ Publication No. 13-EHC077-EF. Rockville, MD: Agency for Healthcare Research and Quality; April 2013. Available at: http://www.effectivehealthcare.ahrq.gov/ehc/products/170/1480/cancer-anemia-treatment-report-130425.pdf. Accessed on September 20, 2017.
- 17. Kidney Disease: Improving Global Outcomes (KDIGO) Anemia Work Group. KDIGO clinical practice guideline for anemia in chronic kidney disease. Kidney Inter., Suppl. 2012; 2:279-335.
- 18. Locatelli F, Aljama P, Canaud B, et al.; Anaemia Working Group of European Renal Best Practice (ERBP). Target haemoglobin to aim for with erythropoiesis-stimulating agents: a position statement by ERBP following publication of the Trial to reduce cardiovascular events with Aranesp therapy (TREAT) study. Nephrol Dial Transplant. 2010; 25(9):2846-2850.
- 19. Martí-Carvajal AJ, Agreda-Pérez LH, Solà I, Simancas-Racines D. Erythropoiesis-stimulating agents for anemia in rheumatoid arthritis. Cochrane Database Syst Rev. 2013;(2):CD000332.
- 20. Mircera [Product Information], Nutley, NJ. Hoffmann-La Roche Inc.; Revised August 2015. Available at: http://www.accessdata.fda.gov/drugsatfda_docs/label/2015/125164s070lbl.pdf. Accessed on September 20, 2017.
- 21. National Comprehensive Cancer Network® (NCCN®) Clinical Practice Guidelines in Oncology (NCCN Guidelines®). © 2017 National Comprehensive Cancer Network, Inc. For additional information visit the NCCN website: http://www.nccn.org/index.asp. Accessed on September 19, 2017.
 - Cancer- and chemotherapy-induced anemia. (V.1.2018). Revised June 23, 2017.
 - Myelodysplastic syndromes. (V.1.2018). Revised August 29, 2017.
- 22. National Kidney Foundation (NKF). Kidney Disease Outcomes Quality Initiative (KDOQI). KDOQI Clinical Practice Guideline and Clinical Practice Recommendations for anemia in chronic kidney disease: 2007 update of hemoglobin target. Am J Kidney Dis. 2007; 50(3):471-530.
- 23. Ohlsson A, Aher SM. Early erythropoietin for preventing red blood cell transfusion in preterm and/or low birth weight infants. Cochrane Database Syst Rev. 2014;(4):CD004863.
- 24. Palmer SC, Saglimbene V, Craig JC, et al. Darbepoetin for the anaemia of chronic kidney disease. Cochrane Database Syst Rev. 2014;(3):CD009297.
- 25. Palmer SC, Saglimbene V, Mavridis D, et al. Erythropoiesis-stimulating agents for anaemia in adults with chronic kidney disease: a network meta-analysis. Cochrane Database Syst Rev. 2014;(12):CD010590.
- 26. Procrit (Epoetin alfa) [Product Information], Raritan, New Jersey: Ortho Biotech, Inc. Revised April 2017. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/103234s5360s5364lbl.pdf. Accessed on September 20, 2017.
- 27. Qaseem A, Humphrey LL, Fitterman N, et al.; Clinical Guidelines Committee of the American College of Physicians. Treatment of anemia in patients with heart disease: a clinical practice guideline from the American College of Physicians. Ann Intern Med. 2013; 159(11):770-779.
- 28. Rizzo JD, Brouwers M, Hurley P, et al. American Society of Hematology/American Society of Clinical Oncology clinical practice guideline update on the use of epoetin and darbepoetin in adult patients with cancer. J Clin Oncol. 2010; 28(33):4996-5010.
- 29. Rizzo JD, Somerfield MR, Hagerty KL, et al.; American Society of Clinical Oncology; American Society of Hematology. Use of epoetin and darbepoetin in patients with cancer: 2007 American Society of Clinical Oncology/American Society of Hematology clinical practice guideline update. J Clin Oncol. 2008; 26(1):132-149.

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	Market Applicability													
Market	DC	FL & FHK	FL MMA	FL LTC	GA	KS	KY	MD	NJ	NV	NY	TN	TX	WA
Applicable	Х	Х	NA	NA	Х	NA	Х	Х	Χ	Χ	Χ	NA	NA	NA

*FHK- Florida Healthy Kids

- 30. Seidenfeld J, Piper M, Bohlius J, et al. Comparative effectiveness of epoetin and darbepoetin for managing anemia in patients undergoing cancer treatment. Comparative effectiveness review No. 3. (Prepared by Blue Cross and Blue Shield Association Technology Evaluation Center Evidence-based Practice Center under Contract No. 290-02-0026). Rockville, MD: Agency for Healthcare Research and Quality. May 23, 2006.
- 31. Sun X, Patnode CD, Williams, C, et al. Interventions to improve patient adherence to hepatitis C treatment: comparative effectiveness. Comparative Effectiveness Review No. 91. (Prepared by the Oregon Evidence based Practice Center under Contract No. 290-2007-10057-I.) AHRQ Publication No. 13- EHC009-EF. Rockville, MD: Agency for Healthcare Research and Quality. December 2012.
- 32. Tonia T, Mettler A, Robert N, et al. Erythropoietin or darbepoetin for patients with cancer. Cochrane Database Syst Rev. 2012;(12):CD003407.
- 33. U.S. Food and Drug Administration. FDA drug safety communication. Updated July 26, 2016. Available at: http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM109375 Accessed on September 20, 2017.
 - Erythropoiesis-stimulating agents (ESAs): procrit, epogen and aranesp. February 16, 2010.
 - Information on Erythropoiesis-Stimulating Agents (ESA) Epoetin alfa (marketed as Procrit, Epogen), Darbepoetin alfa (marketed as Aranesp). April 13, 2017.
 - Modified dosing recommendations to improve the safe use of Erythropoiesis-Stimulating Agents (ESAs) in chronic kidney disease. June 24, 2011.