

**Epoetin alfa:****Epogen®; Procrit®; Retacrit®**  
(Subcutaneous/Intravenous)**\*NON-DIALYSIS\***

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**I. Length of Authorization**

Coverage will be provided for 45 days and may be renewed unless otherwise specified.

- Coverage for Reduction of Allogeneic Blood Transfusions in Elective, Non-Cardiac, Non-Vascular Surgery may not be renewed.

**II. Dosing Limits****A. Quantity Limit (max daily dose) [NDC Unit]:**

- 2,000 U/mL single-dose vial: 3 vials per week
- 3,000 U/mL single-dose vial: 3 vials per week
- 4,000 U/ml single-dose vial: 3 vials per week
- 10,000 U/mL single-dose vial: 3 vials per week
- 10,000 U/mL 2 mL multi-dose vial: 3 vials per week
- 20,000 U/mL 1 mL multi-dose vial: 3 vials per week
- 40,000 U/mL single-dose vial: 1 vial per week

**B. Max Units (per dose and over time) [HCPCS Unit]:**

- MDS: 120 billable units every 7 days
- Surgery patients: 600 billable units every 15 days
- All other indications: 60 billable units every 7 days

### III. Initial Approval Criteria <sup>1-3,6,7</sup>

Retacrit is the preferred erythropoiesis stimulating agent (ESA) product.

- Patients must have a contraindication or intolerance to Retacrit prior to consideration of any other erythropoietin product.

Coverage is provided in the following condition(s):

- Patient is at least 18 years of age (unless otherwise specified); **AND**
- Initiation of therapy Hemoglobin (Hb) < 10 g/dL and/or Hematocrit (Hct) < 30% (unless otherwise specified); **AND**

#### Universal Criteria <sup>1-3,5,8,29</sup>

- Lab values are obtained within 30 days of the date of administration (unless otherwise indicated); **AND**
- Patient has adequate iron stores as demonstrated by serum ferritin  $\geq$  100 ng/mL (mcg/L) and transferrin saturation (TSAT)  $\geq$  20% (measured within the previous 3 months for renewal)\*; **AND**
- Other causes of anemia (e.g. hemolysis, bleeding, vitamin deficiency, etc.) have been ruled out; **AND**
- Patient does not have uncontrolled hypertension; **AND**

#### Anemia Due to Myelodysplastic Syndrome (MDS) † <sup>4,6,27</sup>

- Patient has symptomatic anemia; **AND**
  - Patient has lower risk disease (defined as IPSS [Low/Intermediate-1]); **AND**
    - Used as a single agent for del(5q) mutation (*excluding use in patients with cytogenetic abnormality involving chromosome 7*); **OR**
  - Patient has lower risk disease (defined as IPSS-R [Very Low, Low, Intermediate]); **AND**
    - Patient does not have del(5q) mutation; **AND**
      - Patient has a serum erythropoietin (EPO)  $\leq$  500 mU/mL; **AND**
        - Patient has ring sideroblasts < 15% (or <5% with an SF3B1 mutation); **AND**
          - Used as a single agent; **OR**
          - Used in combination with either lenalidomide or a granulocyte-colony stimulating factor (G-CSF) following no response (despite adequate iron stores) or erythroid response followed by loss of response to an erythropoiesis-stimulating agent (ESA) alone; **OR**

- Patient has ring sideroblasts  $\geq 15\%$  (or ring sideroblasts  $\geq 5\%$  with an SF3B1 mutation); **AND**
  - Used as a single agent; **OR**
  - Used in combination with a G-CSF

#### **Anemia Due to Myeloproliferative Neoplasms (MPN) - Myelofibrosis ‡<sup>4,7,27</sup>**

- Endogenous serum erythropoietin level of  $< 500$  mUnits/mL

#### **Anemia Due to Chemotherapy Treatment †<sup>1-5,27</sup>**

- Patient is at least 5 years of age; **AND**
- Patient is receiving concomitant myelosuppressive chemotherapy for a non-myeloid malignancy; **AND**
- Patient's chemotherapy is not intended to cure their disease (i.e., palliative treatment); **AND**
- There are a minimum of two additional months of planned chemotherapy

#### **Anemia Due to Chronic Kidney Disease (Non-Dialysis Patients) † $\Phi$ <sup>1-3,8,29</sup>**

- Patient is at least 1 month of age

#### **Anemia Due to Zidovudine-Treated, HIV-Infected Patients † ( $\Phi$ – applicable to Procrit/Epogen only)<sup>1-3</sup>**

- Patient is at least 8 months of age; **AND**
- Endogenous serum erythropoietin level of  $\leq 500$  mUnits/mL; **AND**
- Patient is receiving zidovudine administered at  $\leq 4200$  mg/week

#### **Reduction of Allogeneic Blood Transfusions in Elective, Non-Cardiac, Non-Vascular Surgery †<sup>1-3</sup>**

- Hemoglobin (Hb)  $> 10$  g/dL and  $\leq 13$  g/dL and/or Hematocrit (Hct)  $> 30\%$  and  $\leq 39\%$ ; **AND**
- Patient is at high-risk of blood-loss from surgery that is elective, non-cardiac and non-vascular; **AND**
- Patient is unwilling or unable to participate in an autologous blood donation program prior to surgery

† FDA Approved Indication(s); ‡ Compendia Recommended Indication(s);  $\Phi$  Orphan Drug

## **IV. Renewal Criteria<sup>1-3,6,7</sup>**

Coverage can be renewed based upon the following criteria:

- Patient continues to meet universal and other indication-specific relevant criteria identified in section III; **AND**

- Previous dose was administered within the past 60 days; **AND**
- Disease response with treatment as defined by improvement in anemia compared to pretreatment baseline; **AND**
- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include: severe cardiovascular events (stroke, myocardial infarction, congestive heart failure, thromboembolism, etc.), uncontrolled hypertension, increased risk of tumor progression/recurrence in patients with cancer, seizures, pure red cell aplasia, serious allergic reactions (anaphylaxis, angioedema, bronchospasm, etc.), severe cutaneous reactions (erythema multiforme, Stevens-Johnson Syndrome [SJS]/Toxic Epidermal Necrolysis [TEN], etc.), “gasping syndrome” (central nervous system depression, metabolic acidosis, gasping respirations) due to benzyl alcohol preservative, etc.; **AND**

**Anemia Due to Myelodysplastic Syndrome (MDS):**

- Hemoglobin (Hb) <12 g/dL and/or Hematocrit (Hct) <36%

**Anemia Due to Myeloproliferative Neoplasms (MPN) – Myelofibrosis:**

- Hemoglobin (Hb) <10 g/dL and/or Hematocrit (Hct) <30%

**Anemia Due to Chemotherapy Treatment:**

- *Refer to Section III for criteria (age was met initially)*

**Anemia Due to Chronic Kidney Disease (Non-Dialysis Patients):**

- **Pediatric patients:** Hemoglobin (Hb) < 12 g/dL and/or Hematocrit (Hct) < 36%
- **Adult patients:** Hemoglobin (Hb) < 11 g/dL and/or Hematocrit (Hct) < 33%

**Anemia Due to Zidovudine Treated, HIV-Infected Patients:**

- Hemoglobin (Hb) < 12 g/dL and/or Hematocrit (Hct) < 36%; **AND**
- Patient is receiving zidovudine administered at ≤ 4200 mg/week

**Reduction of Allogeneic Blood Transfusions in Elective, Non-Cardiac, Non-Vascular Surgery:**

- Coverage may not be renewed.

<p><i>* Intravenous iron supplementation may be considered when evaluating iron status</i></p> <ul style="list-style-type: none"> <li>• Functional iron deficiency (i.e., adequate iron stores with an insufficient supply of available iron) may occur in patients with chronic diseases, cancer, and/or in those currently receiving ESAs.</li> <li>• Iron is not generally recommended in anemic patients with a Ferritin &gt;500 ng/mL.</li> <li>• Anemic patients with a Ferritin ≤500 ng/mL AND TSAT &lt;50% may derive benefit from IV iron therapy in conjunction with ESA.</li> </ul>
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v. Dosage/Administration <sup>1-3,6,24,28</sup>

Indication	Dose
Anemia due to Chronic Kidney Disease – Non-dialysis §	<ul style="list-style-type: none"> <li>• <b>Adult patients:</b> Administer 50-100 units/kg intravenously or subcutaneously three times weekly</li> <li>• <b>Pediatric patients:</b> Administer 50 units/kg intravenously or subcutaneously three times weekly</li> </ul>
Anemia due to HIV in patients on zidovudine §	<ul style="list-style-type: none"> <li>• Administer 100 units/kg intravenously or subcutaneously three times weekly</li> <li>• May titrate up to 300 units/kg per dose</li> </ul>
Anemia due to chemotherapy §	<ul style="list-style-type: none"> <li>• <b>Adult patients:</b> Administer 150 units/kg subcutaneously three times weekly or 40,000 units subcutaneously once weekly                             <ul style="list-style-type: none"> <li>○ May titrate up to 300 units/kg subcutaneously three times weekly or 60,000 units subcutaneously once weekly</li> </ul> </li> <li>• <b>Pediatric patients (5-18 years):</b> Administer 600 units/kg intravenously once weekly                             <ul style="list-style-type: none"> <li>○ May titrate up to 900 units/kg (maximum 60,000 units) intravenously once weekly</li> </ul> </li> </ul>
Perioperative use	<ul style="list-style-type: none"> <li>• Administer 300 units/kg/day subcutaneously for 10 days before surgery, on the day of surgery, and for 4 days after surgery (15 days total)</li> </ul> <p><b>-OR-</b></p> <ul style="list-style-type: none"> <li>• Administer 600 units/kg/dose subcutaneously on days 21, 14, and 7 before surgery plus 1 dose on the day of surgery (4 total doses)</li> </ul>
Anemia due to MDS §	<ul style="list-style-type: none"> <li>• Administer 40,000 to 60,000 units subcutaneously once to twice weekly</li> </ul>
Anemia due to MPN §	<ul style="list-style-type: none"> <li>• Administer 10,000 units subcutaneously three times weekly</li> <li>• May increase dose to 20,000 units subcutaneously three times weekly</li> </ul>
Most commonly initiated dose	40,000 units weekly

Chapter 1 §

- For patients with CKD:
  - Dose increases of 25% can be considered if after 4 weeks of initial therapy the hemoglobin has increased less than 1 g/dL and the current hemoglobin level is less than the indication specific level noted above.
  - Dose decreases of 25% or more can be considered if the hemoglobin rises rapidly by more than 1 g/dL in any 2-week period.
  - Dose and frequency requested are the minimum necessary for the patient to avoid RBC transfusions.
  - Avoid frequent dose adjustments. Do not increase the dose more frequently than once every 4 weeks; decreases can occur more frequently.
  - If patients fail to respond over a 12-week dose escalation period, further doses increases are unlikely to improve response and discontinuation of therapy should be considered.
- For patients with MDS:
  - After 3 to 4 months of therapy, if there is no response as measured by at least a 1.5 g/dL increase in hemoglobin or a decrease in RBC transfusions, discontinuation of therapy should be considered.
- For patients with MPN:
  - After 3 months of therapy, if there is no response as measured by at least a 2 g/dL increase in hemoglobin or a decrease in RBC transfusions, discontinuation of therapy should be considered.
- For patients on Cancer Chemotherapy:
  - After 8 weeks of therapy, if there is no response as measured by hemoglobin levels or if RBC transfusions are still required, discontinue therapy.
- For zidovudine treated HIV infected patients:
  - If the patient fails to respond after 8 weeks of therapy, increase dose by approximately 50-100 U/kg at 4- to 8- week intervals until the hemoglobin reaches levels needed to avoid transfusion or max dose of 300 U/kg is reached.
  - If the hemoglobin exceeds the indication specific level noted above, withhold therapy and resume therapy once level declines to <11 g/dL, at a dose 25% below the previous dose.

## VI. Billing Code/Availability Information

HCPCS code:

- J0885 – Injection, epoetin alfa, (for non-ESRD use), 1000 units; 1 billable unit = 1,000 units
- Q5106 – Injection, epoetin alfa-epbx, biosimilar, (Retacrit) (for non-ESRD use), 1000 units; 1 billable unit = 1,000 units

NDC:

Brand	HCPCS	Strength	MDV or SDV	MDV Size	NDC
Epogen	J0885	2,000 U/mL	SDV		55513-0126-xx
Epogen	J0885	3,000 U/mL	SDV		55513-0267-xx
Epogen	J0885	4,000 U/mL	SDV		55513-0148-xx
Epogen	J0885	10,000 U/mL	SDV		55513-0144-xx
Epogen	J0885	10,000 U/mL	MDV	2 mL	55513-0283-xx
Epogen	J0885	20,000 U/mL	MDV	1 mL	55513-0478-xx
Procrit	J0885	2,000 U/mL	SDV		59676-0302-xx
Procrit	J0885	3,000 U/mL	SDV		59676-0303-xx
Procrit	J0885	4,000 U/mL	SDV		59676-0304-xx
Procrit	J0885	10,000 U/mL	SDV		59676-0310-xx
Procrit	J0885	10,000 U/mL	MDV	2 mL	59676-0312-xx
Procrit	J0885	20,000 U/mL	MDV	1 mL	59676-0320-xx

Procrit	J0885	40,000 U/mL	SDV		59676-0340-xx
Retacrit	Q5106	2,000 U/mL	SDV		00069-1305-xx
Retacrit	Q5106	3,000 U/mL	SDV		00069-1306-xx
Retacrit	Q5106	4,000 U/mL	SDV		00069-1307-xx
Retacrit	Q5106	10,000 U/mL	SDV		00069-1308-xx
Retacrit	Q5106	10,000 U/mL	MDV	2 mL	00069-1318-xx
Retacrit	Q5106	20,000 U/mL	MDV	1 mL	00069-1311-xx
Retacrit	Q5106	40,000 U/mL	SDV		00069-1309-xx

## VII. References

1. Procrit [package insert]. Horsham, PA; Janssen, LP; April 2023. Accessed April 2023.
2. Epogen [package insert]. Thousand Oaks, CA; Amgen, Inc.; July 2018. Accessed April 2023.
3. Retacrit [package insert]. Lake Forest, IL; Hospira, Inc.; August 2020. Accessed April 2023.
4. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) epoetin alfa. National Comprehensive Cancer Network, 2023. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed April 2023.
5. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Hematopoietic Growth Factors – Management of Cancer-and Chemotherapy-Induced Anemia Version 2.2023. National Comprehensive Cancer Network, 2023. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed April 2023.
6. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Myelodysplastic Syndrome Version 1.2023. National Comprehensive Cancer Network, 2023. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed April 2023.
7. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Myeloproliferative Neoplasms Version 3.2022. National Comprehensive Cancer Network, 2023. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed April 2023.

8. Kidney Disease: Improving Global Outcomes (KDIGO) Anemia Work Group. KDIGO clinical practice guideline for anemia in chronic kidney disease. *Kidney Int Suppl.* 2012;2(suppl):279-335. <https://kdigo.org/guidelines/anemia-in-ckd/>. Published August 2012.
9. Piccoli A, Malagoli A, Komninos G, Pastori G. Subcutaneous epoetin-alpha every one, two, and three weeks in renal anemia. *J Nephrol.* 2002;15(5):565-574.
10. Provenzano R, Bhaduri S, Singh AK; PROMPT Study Group. Extended epoetin alfa dosing as maintenance treatment for the anemia of chronic kidney disease: the PROMPT study. *Clin Nephrol.* 2005;64(2):113-123.
11. Provenzano R, Garcia-Mayol L, Suchinda P, et al; POWER Study Group. Once-weekly epoetin alfa for treating the anemia of chronic kidney disease. *Clin Nephrol.* 2004;61(6):392-405.
12. Singh AJ, Szczech L, Tang KI, et al, "Correction of Anemia With Epoetin Alfa in Chronic Kidney Disease," *N Engl J Med*, 2006, 355(20):2085-98.
13. Fishbane S, Spinowitz BS, Wisemandle WA, et al. Randomized Controlled Trial of Subcutaneous Epoetin Alfa-epbx Versus Epoetin Alfa in End-Stage Kidney Disease. *Kidney Int Rep.* 2019 May 22;4(9):1235-1247.
14. Thadhani R, Guilatco R, Hymes J, et al. Switching from Epoetin Alfa (EpoGen®) to Epoetin Alfa-Epbx (Retacrit™) Using a Specified Dosing Algorithm: A Randomized, Non-Inferiority Study in Adults on Hemodialysis. *Am J Nephrol.* 2018;48(3):214-224.
15. Fishbane S, Singh B, Kumbhat S, et al. Intravenous Epoetin Alfa-epbx versus Epoetin Alfa for Treatment of Anemia in End-Stage Kidney Disease. *Clin J Am Soc Nephrol.* 2018 Aug 7;13(8):1204-1214.
16. US Food and Drug Administration. FDA briefing document. Oncologic Drugs Advisory Committee Meeting. BLA 125545: Epoetin Hospira, a proposed biosimilar to Epogen/Procrit (epoetin alfa). Hospira Inc., a Pfizer Company. May 25, 2017.
17. Fenaux P, Santini V, Spiriti MAA, et al. A phase 3 randomized, placebo-controlled study assessing the efficacy and safety of epoetin- $\alpha$  in anemic patients with low-risk MDS. *Leukemia.* 2018;32(12):2648-2658. doi: 10.1038/s41375-018-0118-9.
18. Park S, Greenberg P, Yucel A, et al. Clinical effectiveness and safety of erythropoietin-stimulating agents for the treatment of low- and intermediate-1-risk myelodysplastic syndrome: a systematic literature review. *Br J Haematol.* 2019;184(2):134-160. doi: 10.1111/bjh.15707
19. Greenberg PL, Sun Z, Miller KB, et al. Treatment of myelodysplastic syndrome patients with erythropoietin with or without granulocyte colony-stimulating factor: results of a prospective randomized phase 3 trial by the Eastern Cooperative Oncology Group (E1996). *Blood.* 2009;114(12):2393-2400.
20. [Peeters, HR, Jongen-Lavrencic, M, Vreugdenhil, G, Swaak, AJ. Effect of recombinant human erythropoietin on anaemia and disease activity in patients with rheumatoid arthritis and anaemia of chronic disease: a randomized placebo controlled double blind 52 weeks clinical trial. \*Ann Rheum Dis\* 1996; 55:739.](#)



21. Pincus T, Olsen NJ, Russell IJ, et al. Multicenter study of recombinant human erythropoietin in correction of anemia in rheumatoid arthritis. *Am J Med* 1990; 89:161-8.
22. Saag, MS, Bowers, P, Leitz, GJ, Levine, AM. Once-weekly epoetin alfa improves quality of life and increases hemoglobin in anemic HIV+ patients. *AIDS Res Hum Retroviruses* 2004; 20:1037.
23. Grossman, HA, Goon, B, Bowers, P, Leitz, G. Once-weekly epoetin alfa dosing is as effective as three times-weekly dosing in increasing hemoglobin levels and is associated with improved quality of life in anemic HIV-infected patients. *J Acquir Immune Defic Syndr* 2003; 34:368.
24. Cervantes F, Alvarez-Laran A, Hernandez-Boluda JC, et al. Erythropoietin treatment of the anaemia of myelofibrosis with myeloid metaplasia: results in 20 patients and review of the literature. *British Journal of Haematology*, 127: 399–403. doi:10.1111/j.1365-2141.2004.05229.x.
25. Shaffer CL, Ransom JL. Current and theoretical considerations of erythropoietin use in anemia of bronchopulmonary dysplasia. *J of Pediatric Pharmacy Practice* 1996; 1:23-29.
26. Reiter PD, Rosenberg AA, Valuck RJ. Factors associated with successful epoetin alfa therapy in premature infants. *Ann Pharmacother* 2000; 34:433-439.
27. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) epoetin alfa-epbx. National Comprehensive Cancer Network, 2023. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc.” To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed April 2023.
28. Tsiara SN, Chaidos A, Bourantas LK, et al. Recombinant human erythropoietin for the treatment of anaemia in patients with chronic idiopathic myelofibrosis. *Acta Haematol.* 2007;117(3):156-61. doi: 10.1159/000097463.
29. Mikhail A, Brown C, Williams JA, et al. Renal association clinical practice guideline on Anaemia of Chronic Kidney Disease. *BMC Nephrol.* 2017 Nov 30;18(1):345. doi: 10.1186/s12882-017-0688-1.
30. Wisconsin Physicians Service Insurance Corporation. Local Coverage Determination (LCD): Erythropoiesis Stimulating (ESAs) (L34633). Centers for Medicare & Medicaid Services, Inc. Updated on 06/22/2021 with effective dates 07/01/2021. Accessed April 2023.
31. CGS Administrators, LLC. Local Coverage Determination (LCD): Erythropoiesis Stimulating Agents (ESA) (L34356). Centers for Medicare & Medicare Services. Updated on 02/23/2023 with effective dates 03/02/2023. Accessed April 2023.
32. National Coverage Determination (NCD) for Erythropoiesis Stimulating Agents (ESAs) in Cancer and Related Neoplastic Conditions (110.21). Centers for Medicare & Medicare Services, Inc. Updated 01/14/2021 with an effective date 07/30/2007. Accessed April 2023.
33. Wisconsin Physicians Service Insurance Corporation. Local Coverage Article (LCA): Billing and Coding: Erythropoiesis Stimulating Agents (ESAs) (A56795). Centers for Medicare & Medicaid Services, Inc. Updated on 10/18/2022 with effective dates 10/01/2022. Accessed April 2023.

- 34. CGS Administrators, LLC. Local Coverage Article (LCA): Billing and Coding: Erythropoiesis Stimulating Agents (ESA) (A56462). Centers for Medicare & Medicaid Services. Updated on 02/28/2023 with effective dates 03/09/2023. Accessed April 2023.
- 35. Palmetto GBA. Local Coverage Article (LCA): Billing and Coding: Erythropoiesis Stimulating Agents (A58982). Centers for Medicare & Medicaid Services. Updated on 08/18/2022 with effective dates 10/01/2022. Accessed April 2023.

## Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
C93.10	Chronic myelomonocytic leukemia, not having achieved remission
C94.40	Acute panmyelosis with myelofibrosis not having achieved remission
C94.41	Acute panmyelosis with myelofibrosis in remission
C94.42	Acute panmyelosis with myelofibrosis in relapse
C94.6	Myelodysplastic disease, not classified
D46.0	Refractory anemia without ring sideroblasts, so stated
D46.1	Refractory anemia with ring sideroblasts
D46.20	Refractory anemia with excess of blasts, unspecified
D46.21	Refractory anemia with excess of blasts 1
D46.4	Refractory anemia, unspecified
D46.9	Myelodysplastic syndrome, unspecified
D46.A	Refractory cytopenia with multilineage dysplasia
D46.B	Refractory cytopenia with multilineage dysplasia and ring sideroblasts
D46.C	Myelodysplastic syndrome with isolated del(5q) chromosomal abnormality
D46.Z	Other myelodysplastic syndromes
D47.1	Chronic myeloproliferative disease
D47.4	Osteomyelofibrosis
D61.1	Drug-induced aplastic anemia
D63.0	Anemia in neoplastic disease
D63.1	Anemia in chronic kidney disease
D63.8	Anemia in other chronic diseases classified elsewhere
D64.81	Anemia due to antineoplastic chemotherapy
D64.9	Anemia unspecified
D75.81	Myelofibrosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
N18.30	Chronic kidney disease, stage 3 (moderate), unspecified
N18.31	Chronic kidney disease, stage 3a

N18.32	Chronic kidney disease, stage 3b
N18.4	Chronic kidney disease, stage 4 (severe)
N18.9	Chronic kidney disease, unspecified
Z41.8	Encounter for other procedures for purposes other than remedying health state
Z51.11	Encounter for antineoplastic chemotherapy
Z51.89	Encounter for other specified aftercare

Chapter 2 Dual coding requirements:

- Preoperative use: must bill D63.8 or D64.9 AND Z41.8 OR bill D63.8 AND Z01.818
- Anemia due to zidovudine in HIV patients: must bill D61.1 AND B20 or B97.35
- Anemia due to CKD (not on dialysis): must bill D63.1 AND I12.9, I13.0, I13.10, N18.30, N18.31, N18.32, N18.4 or N18.9
- Anemia due to Chemotherapy: must bill D64.81 or D61.810 AND C-series, D-series or Q-series coding for NON-myeloid malignancies
- Anemia due to MDS: must bill D47.3 AND D75.81

## Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD), Local Coverage Determinations (LCDs), and Local Coverage Articles (LCAs) may exist and compliance with these policies is required where applicable. They can be found at: <https://www.cms.gov/medicare-coverage-database/search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD/LCA):

<b>Jurisdiction(s):</b> ALL	<b>NCD/LCD/LCA Document (s):</b> 110.21
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=110.21&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=110.21&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

<b>Jurisdiction(s):</b> 5, 8	<b>NCD/LCD/LCA Document (s):</b> L34633
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=L34633&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=L34633&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

<b>Jurisdiction(s):</b> 15	<b>NCD/LCD/LCA Document (s):</b> L34356
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=L34356&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=L34356&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

<b>Jurisdiction(s):</b> 5, 8	<b>NCD/LCD/LCA Document (s):</b> A56795
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a56795&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a56795&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

<b>Jurisdiction(s):</b> 15	<b>NCD/LCD/LCA Document (s):</b> A56462
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a56462&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a56462&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

<b>Jurisdiction(s):</b> J, M	<b>NCD/LCD/LCA Document (s):</b> A58982
<a href="https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a58982&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP">https://www.cms.gov/medicare-coverage-database/new-search/search-results.aspx?keyword=a58982&amp;areald=all&amp;docType=NCA%2CCAL%2CNCD%2CMEDCAC%2CTA%2CMCD%2C6%2C3%2C5%2C1%2CF%2CP</a>	

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	Applicable State/US Territory	Contractor
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA, LLC
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA, LLC
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC