POLICY: Iron Replacement – Monoferric® (ferric derisomaltose injection for intravenous use – Pharmacosmos)

DATE REVIEWED: 03/04/2020

OVERVIEW

Monoferric is an iron replacement product indicated for treatment of iron deficiency anemia in patients ≥ 18 years of age with non-hemodialysis chronic kidney disease, have an intolerance to oral iron, or have had unsatisfactory response to oral iron. Monoferric is administered by intravenous (IV) infusion and treatment may be repeated if iron deficiency remains persistent or recurring. The recommended dose of Monoferric is 1000 mg in patients weighing ≥ 50 kg administered as a single dose per treatment cycle. For patients weighing < 50 kg, the recommended dose is 20 mg/kg administered as a single dose per treatment cycle.

Disease Overview

Iron deficiency anemia is a very broad diagnosis and can have many different etiologies; underlying causes should be corrected when appropriate. Anemia is generally characterized by a decrease in hemoglobin (Hb) or in the volume of red blood cells, which decrease the oxygen-carrying capacity in the blood.[2] Anemia is defined by the World Health Organization as Hb < 13.0 g/dL in men, < 12.0 g/dL in women, and < 11 g/dL during pregnancy.[2,3] Acute-onset anemia can present with tachycardia, lightheadedness, and shortness of breath.[2] Chronic anemia can manifest as weakness, fatigue, headache, dizziness, and pallor. Worldwide, iron deficiency is the most common nutritional deficiency. Anemia is prevalent in patients with CKD and the frequency and severity of anemia may increase with declining renal function. The severity and causes are variable and it can be a sign of other illnesses. Iron deficiency anemia is characterized by decreased levels of ferritin and serum iron, as well as decreased transferrin saturation (TSAT); decreases in Hb and hematocrit may follow.

Guidelines

The KDIGO guidelines for anemia in CKD (2012) make various recommendations regarding iron therapy.[4] For adults with CKD and anemia not on iron or erythroid stimulating agent (ESA) therapy, a trial of IV iron (or in non-dialysis patients with CKD, alternatively, a 1 to 3 month trial of oral iron therapy) is recommended if an increase in Hb concentration without starting ESA treatment is desired and TSAT is ≤ 30% and ferritin is ≤ 500 ng/mL. For adults with CKD on ESA therapy who are not receiving iron supplementation, a trial of IV iron (or in non-dialysis CKD patients, alternatively, a 1 to 3 month trial of oral iron therapy) is recommended if an increase in Hb concentration or a decrease in ESA dose is desired and TSAT is ≤ 30% and ferritin is ≤ 500 ng/mL. For all pediatric patients with CKD with anemia not on iron or ESA therapy, oral iron (or IV iron in patients receiving hemodialysis) is recommended when TSAT is ≤ 20% and ferritin is ≤ 100 ng/mL. For all pediatric patients with CKD who are receiving ESA therapy but not receiving iron supplementation, it is recommended to administer oral iron (or IV iron for patients receiving hemodialysis) to maintain TSAT > 20% and ferritin > 100 ng/dL.

Other Uses with Supportive Evidence

A 2017 focused update of the 2013 American College of Cardiology Foundation/American Heart Association guideline for the management of heart failure. It states that patients with New York Heart Association class II or III heart failure, absolute iron deficiency (ferritin < 100 ng/mL) or functional iron deficiency (ferritin = 100 to 300 mg/mL if transferring saturation is < 20%), and with or without anemia, IV iron replacement may be reasonable to improve function status and quality of life.[5] Benefits noted with

IV iron therapies included improvement in functional capacity, improvements in the six-minute walk test and improved functional capacity.

The National Comprehensive Cancer Network guidelines on Hematopoietic Growth Factors (version 1.2020 – November 15, 2019) discuss the management of cancer- and chemotherapy-induced anemia.[6] IV iron therapy is considered an option for patients with absolute iron deficiency (ferritin < 30 ng/mL and TSAT < 20%), functional iron deficiency (ferritin = 30 to 500 ng/mL and TSAT < 50%), and possible functional iron deficiency (ferritin = 501 to 800 ng/mL and TSAT < 50%).

POLICY STATEMENT

Prior authorization is recommended for medical benefit coverage of Monoferric. Approval is recommended for those who meet the Criteria and Dosing for the listed indication(s). For patients with chronic kidney disease who are on dialysis, prior authorization is not required for medical benefit coverage. All approvals are provided for the duration noted below. Requests for doses outside 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). Because of the specialized skills required for evaluation and diagnosis of patients treated with Monoferric as well as the monitoring required for adverse events and long-term efficacy, approval requires Monoferric to be prescribed by or in consultation with a physician who specializes in the condition being treated in some circumstances.

RECOMMENDED AUTHORIZATION CRITERIA

FDA-Approved Indications

1. **Iron Deficiency Anemia in Patients with Chronic Kidney Disease who are not on Dialysis**. Approve for 1 year if the product meets the following criteria (A and B):
   - **A)** The patient is ≥ 18 years of age; AND
   - **B)** Monoferric is prescribed by, or in consultation with, a nephrologist or hematologist.

   Dosing. Approve up to a maximum dose of 1000 mg given intravenously per 30 days.

2. **Iron Deficiency Anemia, Other.** Approve for 1 year if the patient meets the following (A and B):
   - **A)** The patient is ≥ 18 years of age; AND
   - **B)** The patient meets one of the following (i, ii, iii, or iv):
     - **i.** The patient meets both of the following (a and b):
       - **a)** The patient has tried oral iron supplementation; AND
       - **b)** According to the prescriber, oral iron supplementation was ineffective or intolerable; OR
     - **ii.** The patient has a condition which, per the prescriber, will interfere with oral iron absorption (e.g., inflammatory bowel disease, Crohn's disease); OR
     - **iii.** The patient is currently receiving an erythroid stimulating agent; OR
       Note: Examples of erythroid stimulating agents include an epoetin alfa product, a darbepoetin alfa product, or a methoxy polyethylene glycol-epoetin beta product.
     - **iv.** The medication is being requested for cancer- or chemotherapy-related anemia.

   Dosing. Approve up to a maximum dose of 1000 mg given intravenously per 30 days.

Other Uses with Supportive Evidence

3. Iron Deficiency Anemia in Patients with Chronic Kidney Disease who are on Dialysis. Approve for 3 years.

4. Iron Deficiency Associated with Heart Failure. Approve for 1 year if the product meets the following criteria (A and B):

A) The patient is ≥ 18 years of age; AND

B) Monoferric is being prescribed by, or in consultation with, a cardiologist or hematologist.

Dosing. Approve up to a maximum dose of 1000 mg given intravenously per 30 days.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Monoferric has not been shown to be effective, or there are limited or preliminary data or potential safety concerns that are not supportive of general approval for the following conditions. (Note: This is not an exhaustive list of Conditions Not Recommended for Approval.)

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

REFERENCES

1. Monoferric® injection [prescribing information]. Holbaek, Denmark: Pharmacosmos; January 2020.
2. Cook K, Ineck BA, Lyons WL. Anemias. In: Dipiro JT, Talbert RL, Yee GC, et al, (Eds). Pharmacotherapy – A Pathophysiologic Approach. 8th Ed, New York, NY: McGraw-Hill Companies, Inc. 2011:1717-1740.
3. Camaschella C. Iron deficiency. *Blood*. 2019;133(1):30-39.
4. Kidney Disease: Improving Global Outcomes (KDIGO) Anemia Work Group. KDIGO Clinical Practice Guideline for Anemia in Chronic Kidney Disease. *Kidney Int*. 2012;2(Suppl):279-335.
5. Yancy CW, Jessup M, Bozkurt B, et al. 2017 ACC/AHA/HFSA focused update of the 2013 ACCF/AHA guideline for the management of heart failure. *J Am Coll Cardiol*. 2017;70(6):776-803.
6. The NCCN® Hematopoietic Growth Factors Guidelines in Oncology (Version 2.2020 – January 27, 2020). 2020 National Comprehensive Cancer Network, Inc. Available at: http://www.nccn.org/clinical.asp. Accessed on February 4, 2020.

HISTORY

Type of Revision	Summary of Changes	Date Reviewed
New policy	--	03/04/2020