

#### Prior Authorization DRUG Guidelines

# **INFeD®** (iron dextran)

Effective Date: 10/23/12
Date Developed: 10/15/12 by Albert Reeves MD

Last Approval Date: 1/26/16, 1/24/17, 1/23/18, 1/22/19, 2/18/20

**INFeD®** is a Hematinic.

## **Pre-Authorization Criteria:**

VCHCP will authorize **INFeD®** for FDA approved treatment of iron deficiency in patients in whom oral administration is infeasible or ineffective.

Use-Unlabeled Cancer-/chemotherapy-associated anemia.

## **Dosing: Adult**

Iron-deficiency anemia: I.M. (INFeD®), I.V., INFeD®):

Dose (mL) = 0.0442 (desired Hgb - observed Hgb) x LBW + (0.26 x LBW)

Desired hemoglobin: Usually 14.8 g/dL

LBW = Lean body weight in kg

**Iron replacement therapy for blood loss:** (INFeD®), I.V. (INFeD®): Replacement iron (mg) = blood loss (mL) x Hct

**Maximum daily dosage:** Manufacturer's labeling: **Note:** Replacement of larger estimated iron deficits may be achieved by serial administration of smaller incremental dosages. Daily dosages should be limited to 100 mg iron (2 mL)

Total dose infusion (unlabeled): The entire dose (estimated iron deficit) may be diluted and administered as a one-time I.V. infusion.

Cancer-/chemotherapy-associated anemia (NCCN guidelines v.2.2010) (unlabeled use): I.V.: Test dose: 25 mg slow I.V. slow push, followed 1 hour later by 100 mg over 5 minutes; larger doses (unlabeled), up to total dose infusion (over several hours) may be administered. Low-molecular-weight iron dextran preferred.

# **Dosing: Pediatric**

Iron-deficiency anemia: I.M. (INFeD®), I.V. INFeD®):

Children 5-15 kg: Should not normally be given in the first 4 months of life:

Dose (mL) = 0.0442 (desired Hgb - observed Hgb) x W + (0.26 x W)

Desired hemoglobin: Usually 12 g/dL

W = Total body weight in kg

Children >15 kg: Refer to adult dosing.

Iron replacement therapy for blood loss: Refer to adult dosing.

Maximum daily dose:

Children <5 kg: 25 mg iron (0.5 mL)

Children 5-10 kg: 50 mg iron (1 mL)

Children ≥10 kg: Refer to adult dosing.

# **DOSAGE FORMS AND STRENGTHS**

Injection, solution:

INFeD®: Elemental iron 50 mg/mL (2 mL) [low-molecular-weight iron dextran]

## **ADMINISTRATION:**

- I.M. (INFeD®): Use Z-track technique (displacement of the skin laterally prior to injection); injection should be deep into the upper outer quadrant of buttock; alternate buttocks with subsequent injections. Administer test dose at same recommended site using the same technique.
- I.V.: Test dose should be given gradually over at least 30 seconds (INFeD®). Subsequent dose(s) may be administered by I.V. bolus undiluted at a rate not to exceed 50 mg/minute or diluted in 250-1000 mL NS and infused over 1-6 hours (initial 25 mL should be given slowly and patient should be observed for allergic reactions); avoid dilutions with dextrose (increased incidence of local pain and phlebitis)

# Warnings/Precautions

#### Concerns related to adverse effects:

- Delayed reaction: Delayed (1-2 days) infusion reaction (including arthralgia, back pain, chills, dizziness, and fever) may occur with large doses (eg, total dose infusion) of I.V. iron dextran; usually subsides within 3-4 days.
   May also occur (less commonly) with I.M. administration; subsiding within 3-7 days.
- Hypersensitivity/anaphylactoid reactions: [U.S. Boxed Warning]: Deaths
  associated with parenteral administration following anaphylactictype reactions have been reported (use only where resuscitation
  equipment and personnel are available). A test dose should be
  administered to all patients prior to the first therapeutic dose.
  Anaphylactic and other hypersensitivity reactions have occurred

even in patients who tolerated the test dose; observe for anaphylactic reactions during any iron dextran administration. A history of drug allergy (including multiple drug allergies) and/or the concomitant use of an ACE inhibitor may increase the risk of anaphylactic-type reactions. Adverse events (including life-threatening) associated with iron dextran usually occur more with the high-molecular-weight formulation (Dexferrum®), compared to low-molecular-weight (INFeD®) (Chertow, 2006).

#### REFERENCES

- Auerbach M, Ballard H, Trout JR, et al, "Intravenous Iron Optimizes the Response to Recombinant Human Erythropoietin in Cancer Patients With Chemotherapy-Associated Anemia: A Multicenter, Open-Label, Randomized Trial," *J Clin Oncol*, 2004, 22(7):1301-7. [PubMed 15051778]
- 2. Auerbach M, Witt D, and Toler W, "Clinical Use of the Total Dose Intravenous Infusion of Iron Dextran," *J Lab Clin Med*, 1988, 111(5):566-70. [PubMed 3361236]
- 3. Benito RP and Guerrero TC, "Response to a Single Intravenous Dose Versus Multiple Intramuscular Administration of Iron Dextran Complex: A Comparative Study," *Curr Ther Res Clin Exp*, 1973, 15(7):373-82. [PubMed 4198298]
- Chertow GM, Mason PD, Vaage-Nilsen O, et al, "Update on Adverse Drug Events Associated With Parenteral Iron," *Nephrol Dial Transplant*, 2006, 21(2):378-82. [PubMed 16286429]
- 5. Lipschitz DA, "The Anemia of Chronic Disease," *J Am Geriatr Soc*, 1990, 38(11):1258-64. [PubMed 2123218]
- National Comprehensive Cancer Network® (NCCN), "Practice Guidelines in Oncology™: Cancer- and Chemotherapy-Induced Anemia Version 2.2010." Available at http://www.nccn.org/professionals/physician\_gls/PDF/anemia.pdf
- 7. National Kidney Foundation, "KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease," *Am J Kidney Dis*, 2007, 50(3):529-30. Available at http://www.kidney.org/professionals/KDOQI/guidelines\_anemiaUP/index.htm or http://www.kidney.org/professionals/KDOQI

- Rizzo JD, Somerfield MR, Hagerty LK, et al, "American Society of Hematology/American Society of Clinical Oncology 2007 Clinical Practice Guideline Update on the Use of Epoetin and Darbepoetin," *Blood*, 2008, 111(1):25-41. [PubMed 17954703]
- 9. ©2013 UpToDate® www.uptodate.com

#### **Revision History:**

Date Reviewed/No Updates: 1/16/13 by A. Reeves MD Date Approved by P&T Committee: 10/23/12; 1/29/13 Date Reviewed/No Updates: 1/28/14 by C. Sanders MD

Date Approved by P&T Committee: 1/28/14

Date Reviewed/No Updates: 1/13/15 by C. Sanders, MD

Date Approved by P&T Committee: 1/27/15

Date Reviewed/No Updates: 1/26/16 by C. Sanders, MD; R. Sterling, MD

Date Approved by P&T Committee: 1/26/16

Date Reviewed/No Updates: 1/24/17 by C. Sanders, MD; R. Sterling, MD

Date Approved by P&T Committee: 1/24/17

Date Reviewed/No Updates: 1/23/18 by C. Sanders, MD; R. Sterling, MD

Date Approved by P&T Committee: 1/23/18

Date Reviewed/No Updates: 1/22/19 by C. Sanders, MD; R. Sterling, MD

Date Approved by P&T Committee: 1/22/19

Date Reviewed/No Updates: 2/18/20 by H. Taekman, MD; R. Sterling, MD

Date Approved by P&T Committee: 2/18/20

Revision Date	Content Revised (Yes/No)	Contributors	Review/Revision Notes
1/24/17	No	Catherine Sanders, MD;	Annual review
		Robert Sterling, MD	
1/23/18	No	Catherine Sanders, MD;	Annual review
		Robert Sterling, MD	
1/22/19	No	Catherine Sanders, MD;	Annual review
		Robert Sterling, MD	
2/18/20	No	Howard Taekman, MD;	Annual review
		Robert Sterling, MD	