



CHOOSE

for your appropriate patients with iron deficiency (ID) and heart failure¹

The **first and only FDA-approved IV iron** to treat iron deficiency in adult patients with heart failure (HF) and New York Heart Association (NYHA) class II/III to improve exercise capacity.¹⁻⁶

THE 2022 AHA/ACC/HFSA GUIDELINES RECOMMEND7:

Routine baseline assessments for iron deficiency and anemia in **all** patients with HF (class 1 recommendation) Complete blood count, ferritin, serum iron, and transferrin saturation (TSAT) testing (class 1 recommendation) Treating HFrEF and iron deficiency with or without anemia, with an IV iron (class 2a recommendation)

ACC=American College of Cardiology; AHA=American Heart Association; HFrEF=heart failure with reduced ejection fraction; HFSA=Heart Failure Society of America; IV=intravenous.

INDICATIONS

Injectafer® (ferric carboxymaltose injection) is indicated for the treatment of iron deficiency anemia (IDA) in adult and pediatric patients 1 year of age and older who have either intolerance or an unsatisfactory response to oral iron, and in adult patients who have non-dialysis dependent chronic kidney disease. Injectafer is also indicated for iron deficiency in adult patients with heart failure and New York Heart Association class II/III to improve exercise capacity.

SELECTED SAFETY INFORMATION

CONTRAINDICATIONS

Injectafer is contraindicated in patients with hypersensitivity to Injectafer or any of its inactive components.

<u>Click here</u> to see accompanying Full Prescribing Information and see Important Safety Information throughout.



IRON IS ESSENTIAL TO MAINTAIN NORMAL FUNCTIONING OF CARDIAC CELLS⁸

The role and dual effects of iron deficiency in the heart

Inadequate iron levels result in reduction Iron deficiency in the synthesis of results in attenuated Iron is critical for Oxygen transport iron-containing energetic efficiency oxygen uptake, and cellular proteins such as and submaximal transport, storage, oxidative capacity hemoglobin (Hb) and exercise metabolism, and are reduced.8 aerobic enzymes.9 performance.9,10 energy production. It is also involved in erythropoiesis.8

Including iron deficiency, patients with HF are likely to have multiple comorbidities^{11,12}*†



*Data range: 11/01/2019-10/31/21.¹³ †Data source: SHS Claims.¹³

SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS

Symptomatic Hypophosphatemia

Symptomatic hypophosphatemia with serious outcomes including osteomalacia and fractures requiring clinical intervention has been reported in patients treated with Injectafer in the post-marketing setting. These cases have occurred mostly after repeated exposure to Injectafer in patients with no reported history of renal impairment. However, symptomatic hypophosphatemia has been reported after one dose. Possible risk

factors for hypophosphatemia include a history of gastrointestinal disorders associated with malabsorption of fat-soluble vitamins or phosphate, inflammatory bowel disease, concurrent or prior use of medications that affect proximal renal tubular function, hyperparathyroidism, vitamin D deficiency, malnutrition, and hereditary hemorrhagic telangiectasia (HHT or Osler-Weber-Rendu syndrome). In most cases, hypophosphatemia resolved within three months.

IRON DEFICIENCY IS A COMMON COMORBIDITY IN HF THAT IS OFTEN UNDERDIAGNOSED AND UNDERTREATED14-16



Risk factors for iron deficiency in HF¹⁸:

- Female sex
- A more advanced stage of HF
- Higher levels of N-terminal proB-type natriuretic peptide (NT-proBNP) and C-reactive protein (CRP)

Exercise capacity is a measure that can be objectively quantified, tracked, and treated 19,20



Track

The **6-minute walk test (6MWT)** objectively measures a patient's submaximal functional capacity.¹⁹



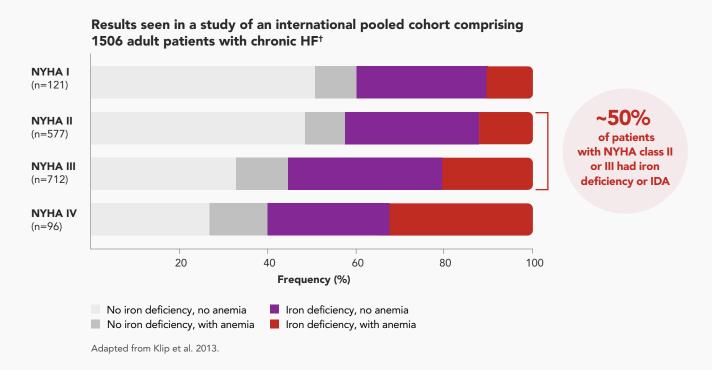
Treat

Diagnosing iron deficiency in patients with HF is important since **intravenous correction** of iron deficiency has been shown to improve exercise performance.²⁰



^{*}Based on the National Health and Nutrition Examination Survey (NHANES) data 2015-2018. 17

THE INCIDENCE OF IRON DEFICIENCY OR IDA IS CORRELATED WITH THE SEVERITY OF HF21*



NYHA class II: Patients are comfortable at rest but have slight symptoms resulting from HF (dyspnea, fatigue, lightheadedness) with ordinary activity.⁷

NYHA class III: Patients are comfortable at rest but have symptoms of HF with less than ordinary activity.⁷

SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (CONT'D)

Symptomatic Hypophosphatemia (cont'd)
Correct pre-existing hypophosphatemia prior to initiating therapy with Injectafer. Monitor serum phosphate levels in patients at risk for chronic low serum phosphate. Check serum phosphate levels

prior to a repeat course of treatment in patients at risk for low serum phosphate and in any patient who receives a second course of therapy within three months. Treat hypophosphatemia as medically indicated.

^{*}Data were captured from a single measurement in time, and the effects of changes in iron, anemia, or NYHA functional class status over time should not be inferred.²¹

[†]Patients with both iron deficiency and anemia were older and had a higher NYHA functional class, more comorbidities, and higher biomarker levels compared with those with iron deficiency and no anemia.²¹

ROUTINE BLOOD TESTS FOR IRON ARE STRONGLY RECOMMENDED TO ENSURE PROPER DIAGNOSIS⁷

Iron deficiency, anemia, and iron deficiency anemia (IDA) are 3 different conditions.9

Many HF symptoms can look like iron deficiency, such as: **dyspnea, fatigue, and heart palpitations**.* It's important to obtain lab values for key iron deficiency indices.^{7, 22-24}

To diagnose iron deficiency in HF, in addition to checking Hb, look for⁷:



IDA in HF: Ferritin <100 ng/mL or 100 ng/mL-300 ng/mL if TSAT is <20% with Hb <13 g/dL in men and <12 g/dL in women; **anemia in HF:** Hb <13 g/dL in men and <12 g/dL in women.^{7, 25-26}

2022 AHA/ACC/HFSA Guidelines: in HF, all baseline laboratory assessments should include complete blood count, ferritin, serum iron, and TSAT (class 1 [strong] recommendation)⁷



^{*}Injectafer is not indicated to treat the symptoms of HF or iron deficiency (ID).

INJECTAFER IS THE FIRST AND ONLY IV IRON THAT IS FDA-APPROVED TO TREAT IRON DEFICIENCY IN HF1-6

IV iron can be effective⁷

- ✓ IV iron is a class 2a recommendation in the 2022 AHA/ACC/HFSA Guidelines to treat patients with HFrEF and iron deficiency with or without anemia⁷
 - **CONFIRM-HF** was one of the clinical trials that was cited as evidence and helped inform the class 2a recommendation to prescribe IV iron⁷
- With IV iron, 100% of iron is delivered into the bloodstream
- Oral iron therapy was not proven to be effective in iron repletion and did not improve exercise capacity for the treatment of iron deficiency in patients with HFrEF^{7,27}





Choose Injectafer as a first-line treatment for iron deficiency in adult patients with HF and NYHA class II/III to improve exercise capacity¹

SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (CONT'D)

Hypersensitivity Reactions

Serious hypersensitivity reactions, including anaphylactic-type reactions, some of which have been life-threatening and fatal, have been reported in patients receiving Injectafer. Patients may present with shock, clinically significant hypotension, loss of consciousness, and/or

collapse. Monitor patients for signs and symptoms of hypersensitivity during and after Injectafer administration for at least 30 minutes and until clinically stable following completion of the infusion. Only administer Injectafer when personnel and therapies are immediately available for the treatment of serious hypersensitivity reactions.

INJECTAFER WAS EVALUATED IN THE CONFIRM-HF STUDY²⁸

A randomized (1:1), double-blind, placebo-controlled, multicenter study²⁸

A total of 304 patients were randomized and treated.²⁸



Baseline mean (SD)¹

Hb	12 g/dL (1.4)	
Ferritin	57 ng/mL (45)	
TSAT	19% (13.7)	
LVEF	37% (7)	
Brain natriuretic peptide	770 pg/mL (973)	

- 57% were classified as NYHA class II1
- 43% were classified as NYHA class III1
- The median age of study patients was
 71 years (range, 35 to 88)¹
- 46% were female¹
- 99% were Caucasian¹

At baseline, 95% of patients were treated with angiotensin converting enzyme inhibitor (ACEi) or angiotensin receptor blocker (ARB), 91% with beta-blocker, 59% with aldosterone antagonists, and 90% with diuretic.¹

Key criteria²⁸



HF: NYHA functional class II or III (due to stable symptomatic chronic HF); LVEF ≤45%



Iron deficiency: Hb <15 g/dL; serum ferritin <100 ng/mL (or 100 ng/mL-300 ng/mL with TSAT <20%)

Primary efficacy endpoint²⁸*

Change in 6MWT distance from baseline to week 24.

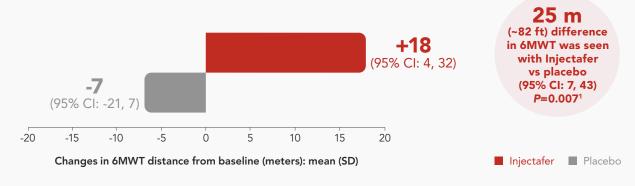
⁶MWT=6-minute walk test, which is also referred to as the 6-minute walk distance (6MWD); LVEF=left ventricular ejection fraction.



^{*}Secondary endpoints included: change in patient global assessment, change in NYHA functional class, change in 6MWT (from baseline to weeks 6, 12, 36 and 52), change in fatigue score, change in Kansas City Cardiomyopathy Questionnaire, change in European Quality of Life 5D (EQ-5D) questionnaire, time to first hospitalization due to worsening HF, and rates of any hospitalization.²⁸

INJECTAFER SIGNIFICANTLY IMPROVED 6-MINUTE WALK TEST (6MWT)^{1,13}

Improvements in 6MWT at 24 weeks^{1,13}





Increases in ferritin, TSAT, and Hb at week 24¹

- At baseline, mean (SD) ferritin was 57 ng/mL (45). Change from baseline to week 24 in ferritin was 269 ng/mL (229, 309)
- At baseline, mean (SD) TSAT was 19% (13.7). Change from baseline to week 24 in TSAT was 9% (7, 11)
- At baseline, mean (SD) Hb was 12 g/dL (1.4). Change from baseline to week 24 in Hb was 0.6 g/dL (0.3, 0.8)

 ${\it Cl-} confidence\ interval;\ {\it SD-} standard\ deviation.$

SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (CONT'D)

Hypersensitivity Reactions (cont'd)

In clinical trials, serious anaphylactic/anaphylactoid reactions were reported in 0.1% (2/1775) of subjects receiving Injectafer. Other serious or severe adverse reactions potentially associated with hypersensitivity which included, but were not limited to, pruritus, rash, urticaria, wheezing, or hypotension were reported in 1.5% (26/1775) of these subjects.

Hypertension

In clinical studies, hypertension was reported in 4% (67/1775) of subjects in clinical trials 1 and 2. Transient elevations in systolic blood pressure, sometimes occurring with facial flushing, dizziness, or nausea were observed in 6% (106/1775) of subjects in these two clinical trials.

SAFETY PROFILE OF INJECTAFER ACROSS THE IRON DEFICIENCY AND HEART FAILURE CLINICAL TRIALS

In clinical trials evaluating Injectafer in adult patients with iron deficiency and heart failure (1016 patients received Injectafer vs 857 received placebo), the overall safety was consistent across the studied indications.¹

Adverse events (AE) in CONFIRM-HF²⁸

Safety endpoint or event	Injectafer (n=152) n (%) events	Placebo (n=152) n (%) events
Subject with at least one drug-related AE	14 (9.2) 24	5 (3.3) 7
General disorders and administration site conditions	9 (5.9) 9	2 (1.3) 2
Skin and subcutaneous tissue disorders	4 (2.6) 4	0 (0.0) 0
Nervous system disorders	2 (1.3) 3	1 (0.7) 1
Gastrointestinal disorders	2 (1.3) 3	0 (0.0) 0
Vascular disorders	1 (0.7) 2	1 (0.7) 1
Investigations	1 (0.7) 1	2 (1.3) 2
Ear and labyrinth disorders	1 (0.7) 1	0 (0.0) 0
Injury, poisoning and procedural complications	1 (0.7) 1	0 (0.0) 0
Cardiac disorders	0 (0.0) 0	1 (0.7) 1

%=percentage of above in the total number of subjects in the group; events=total number of events; n=number of subjects experiencing at least one time the considered event.



RECOMMENDED WEIGHT-BASED DOSING FOR ADULT PATIENTS WITH IRON DEFICIENCY AND HF1

After determining your adult patients with HF and NYHA class II/III have iron deficiency, calculate the total iron needed using the dosing tables below¹



Initial dose is based on Hb at baseline



Patients with lower Hb at baseline may require a week 6 dose



Reassess iron parameters at week 12. Maintenance dosing is recommended if iron deficiency is still present

DAY 1

Hb (g/dL)	Patient body weight <70 kg or ≥70 kg	
≤14	1000 mg	
>14*	500 mg	

^{*}There are no data available to guide Injectafer dosing in patients with Hb ≥15.

WEEK 6[†]

Hb (g/dL)	Patient k <70 kg	oody weight ≥70 kg
<10	500 mg	1000 mg
≥10*		500 mg

^{*}There are no data available to guide Injectafer dosing in patients with Hb ≥15.

Hb (g/dL) > 14.

WEEK 12, 24, AND 36‡

Administer a maintenance dose of 500 mg, if serum ferritin <100 ng/mL or serum ferritin 100 ng/mL to 300 ng/mL with TSAT < 20%

[‡]There are no data available to guide Injectafer dosing past 36 weeks.



For your adult and pediatric patients 1 year of age and older with IDA who have either intolerance or an unsatisfactory response to oral iron, continue to use 2 doses of 750 mg separated by at least 7 days 15111

A majority of patients with HF received 1500 mg or more of Injectafer^{1,28}

In the Injectafer pivotal trials for the treatment of IDA, a fixed-dose regimen of 1500 mg was used.1 In CONFIRM-HF (a trial specific to iron deficiency treatment in certain HF patients), the mean and median total dose was 1500 mg (with a dosing range of 500 mg-3500 mg iron).²⁸





Not actual size.

[†]No week 6 dose is needed for patients with a

For patients weighing less than 50 kg (110 lb), the recommended dosage is Injectafer 15 mg/kg body weight intravenously in 2 doses separated by at least 7 days per course.

[&]quot;When administered via infusion, dilute up to 750 mg of iron in no more than 250 mL of sterile 0.9% sodium chloride injection, USP, such that the concentration of the infusion is not <2 mg of iron per mL, and administer over at least 15 minutes. When administering Injectafer 500 mg or 750 mg as a slow IV push, give at the rate of approximately 100 mg (2 mL) per minute.^{1,13}

Injectafer is a first-line treatment for adult patients with IDA who have non-dialysis dependent chronic kidney disease.1

Injectafer is the only high-dose IV iron with options for administration¹⁻⁶



up to 250 mL diluted for IV infusion¹

OR



as a slow IV push (refer to the Full Prescribing Information for details)1



SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (CONT'D)

Hypertension (cont'd)

These elevations generally occurred immediately after dosing and resolved within 30 minutes. Monitor patients for signs and symptoms of

hypertension following each Injectafer administration.



Click here to see accompanying Full Prescribing Information and see Important Safety Information throughout.

ARE YOU SCREENING PATIENTS LIKE THESE FOR IRON DEFICIENCY?



Sandra | 67

MEDICARE PATIENT, IRON DEFICIENCY AND HF

Medical history

- 67-year-old female patient on Medicare
- 3-year history of HF due to drug-induced dilated cardiomyopathy secondary to chemotherapy
- Atrial fibrillation
- Breast cancer, treated
 5 years ago with CAF
 (cyclophosphamide,
 Adriamycin, fluorouracil)

Clinical presentation

- Increasing fatigue and heart palpitations²³
- Daily activities, such as walking and climbing stairs, are more difficult²⁹
- Asks her family members for help more often, and she feels anxious about the amount of caretaking she requires
- LVEF: 33%
- NYHA functional class III

- BMI: 23
- Oral medications:
 - Sacubitril/valsartan97/103 mg BID
 - Metoprolol succinate
 100 mg daily
 - Furosemide 80 mg daily
 - Empagliflozin 10 mg daily
 - Apixaban 5 mg BID
 - Tamoxifen 20 mg BID

Note: Patient depicted is fictional and for illustrative purposes only.

BID=2 times a day; BMI=body mass index.

SELECTED SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (CONT'D)

Laboratory Test Alterations

In the 24 hours following administration of Injectafer, laboratory assays may overestimate

serum iron and transferrin bound iron by also measuring the iron in Injectafer.

SANDRA: EXERCISE CAPACITY JEOPARDIZED BY **DELAYED DIAGNOSIS OF IRON DEFICIENCY**

Initial testing

- Repeat cardiac diagnostic workup electrocardiogram and echocardiogram
- Oncology follow-up lab tests and imaging
- Diagnostic workup yielded no new findings



Sandra was not started on oral iron as oral iron therapy was not proven to be effective in iron repletion and did not improve exercise capacity for the treatment of iron deficiency in patients with HF. Instead, she was started on Injectafer.7,27

Follow-up diagnostic workup for iron deficiency

- Diagnostic workup was delayed due to a complicated medical history
- 6MWT: 304 meters (997 feet)
- Folate, vitamin B12: normal
- Ferritin: 35 ng/mL
- TSAT: 12%

- Hb: 13.1 g/dL
- Hematocrit (HCT): 38%
- Mean corpuscular volume (MCV): 75 fL
- Mean corpuscular hemoglobin (MCH): 26 pg
- Serum iron: 50 mcg/dL

Sandra's 2-month follow-up on Injectafer

- 6MWT: 322 meters (1056 feet)
- Laboratory tests:
 - Ferritin: 312 ng/mL
 - TSAT: 29%
 - Hb: 14.0 g/dL
 - HCT: 40%

- MCV: 86 fL
- MCH: 30 pg
- Serum iron: 110 mcg/dL



Normal lab values for reference³⁰⁻³²

- Ferritin: 20 ng/mL-200 ng/mL (females)
 MCV: 80 fL-100 fL
- TSAT: 20%-50%
- Hb: 12 g/dL-15.5 g/dL
- HCT: 36%-47% (females)

- MCH: 28 pq-32 pq
- Serum iron:
 - 35 mcg/dL-145 mcg/dL (females)



DAVID: EXERCISE CAPACITY CONTINUES TO DETERIORATE AS HIS NDD-CKD COMPLICATES HIS PROGNOSIS



David | 75

MEDICARE PATIENT, IRON DEFICIENCY, HF, AND NDD-CKD

In addition to iron deficiency, patients with HF may have multiple comorbidities.^{11,12} This is true for David. Complicating this further, HF and iron deficiency can share similar symptoms such as dyspnea, fatigue, and heart palpitations.²²⁻²⁴

Medical history

- 75-year-old male patient on Medicare
- History of CAD, hypertension, and NDD-CKD

Clinical presentation

- David has been hospitalized 2 times for HF in the past year
- His dyspnea and edema frequently get in the way of his ability to complete chores^{22-24, 29}
- Takes naps daily, but his breathing worsens when lying down^{22-24, 29}
- LVEF: 40%
- NYHA functional class III
- BMI: 34

- Oral medications:
 - Torsemide 60 mg daily
 - Spironolactone25 mg daily
 - Metoprolol succinate
 200 mg daily
 - Atorvastatin 40 mg daily
 - Dapagliflozin 10 mg daily
 - Sacubitril/valsartan49/51 mg BID
 - Aspirin 81 mg daily

Note: Patient depicted is fictional and for illustrative purposes only.

CAD=coronary artery disease; NDD-CKD=non-dialysis dependent chronic kidney disease.

SELECTED SAFETY INFORMATION ADVERSE REACTIONS

Adults

In two randomized clinical studies [Studies 1 and 2], a total of 1775 patients were exposed to Injectafer, 15 mg/kg of body weight, up to a maximum single dose of 750 mg of iron on two occasions, separated by at least 7 days, up to

a cumulative dose of 1500 mg of iron. Adverse reactions reported by >2% of Injectafer-treated patients were nausea (7.2%); hypertension (4%); flushing (4%); injection site reactions (3%); erythema (3%); hypophosphatemia (2.1%); and dizziness (2.1%).

Diagnostic workup for anemia and iron deficiency

• 6MWT: 288 meters (944 feet)

• Ferritin: 35 ng/mL

TSAT: 17%Hb: 13 g/dLMCV: 70 fL

• MCH: 26 pg

• Serum iron: 66 mcg/dL

 Gastrointestinal workup including endoscopy and colonoscopy yielded no new findings



Normal lab values for reference³⁰⁻³²

• 40 ng/mL-300ng/mL (males)

• TSAT: 20%-50%

• Hb:13.5 g/dL-17.5 g/dL (males)

• MCV: 80 fL-100 fL

• MCH: 28 pg-32 pg

• Serum iron: 50 mcg/dL-150 mcg/dL (males)



David was not started on oral iron as oral iron therapy was not proven to be effective in iron repletion and did not improve exercise capacity for the treatment of iron deficiency in patients with HF. Instead, he was started on Injectafer.^{7,27}

David's 2-month follow-up on Injectafer

• 6MWT: 306 meters (1003 feet)

Laboratory tests:

- Ferritin: 255 ng/mL

- TSAT: 26%

- Hb: 13.8 g/dL

- MCV: 98 fL

- MCH: 29 pg

- Serum iron: 98 mcg/dL



INJECTAFER IS THE IV IRON THAT OFFERS MORE



The first and only

FDA-approved IV iron to treat iron deficiency (ID) in appropriate adult patients with HF¹⁻⁶



Most-studied IV iron treatment

with more than 40 clinical trials and >8800 patients treated worldwide^{13*}



Approved in 86 countries

since its initial EU approval in 2007^{13†}



#1 IV iron treatment

in worldwide sales^{13‡}



More than 24 million patient-years

in postmarketing treatment experience worldwide^{13†}



#1 IV iron treatment by volume

among oncologists and gastroenterologists 13§II



Over 3 million patients

in the United States have been treated with Injectafer^{13¶}



The first and only

high-dose IV iron approved for pediatric patients¹⁻⁶



Over a decade

on the market¹



For more information about Injectafer, please visit injectaferhcp.com

^{*}Source: Trialtrove®, Mar 2021.¹³

[†]Source: Periodic safety update report (PSUR), Feb 2023.¹³

 $^{^{\}ddagger}\text{Source: CSL}$ European Investor Site Tour Presentations (Mar 2023). 13

 $^{^{\}S}$ Source: Symphony Health Solutions PHAST Non-Retail Dec 2019-Nov-2020 (MAT Nov 2020). 13

 $^{^{\}parallel}$ Source: IQVIA IV Iron Landscape (Dx and CDM Data-Jul-Oct 2020). 13

[¶]Source: SHS claims data launch to Aug 2024. ¹³

EU=European Union.

REFERENCES

- 1. Injectafer. Package insert. American Regent, Inc; 2025.
- 2. Venofer. Package insert. American Regent, Inc; 2022.
- 3. Ferrlecit. Package insert. sanofi-aventis U.S. LLC; 2022.
- 4. INFeD. Package insert. Allergan USA, Inc; 2021.
- **5.** Feraheme. Package insert. AMAG Pharmaceuticals, Inc; 2022.
- Monoferric. Package insert. Pharmacosmos Therapeutics Inc; 2022
- 7. Heidenreich PA, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA guideline for the management of heart failure: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. J Am Coll Cardiol. 2022;79(17):e263-e421. doi:10.1016/j. jacc.2021.12.012
- Anker SD, Kirwan BA, van Veldhuisen DJ, et al. Effects of ferric carboxymaltose on hospitalisations and mortality rates in iron-deficient heart failure patients: an individual patient data meta-analysis. Eur J Heart Fail. 2018;20(1):125-133. doi:10.1002/ejhf.823
- Haas JD, Brownlie IV T. Iron deficiency and reduced work capacity: a critical review of the research to determine a causal relationship. J Nutr. 2001;131(2S-2):676S-688S; discussion 688S-690S. doi:10.1093/jn/131.2.676S
- **10.** Dallman PR. Iron deficiency: does it matter? *J Intern Med.* 1989;226(5):367-372. doi:10.1111/j.1365-2796.1989.tb01410.x
- 11. Manemann SM, Chamberlain AM, Boyd CM, et al. Multimorbidity in heart failure: impact on outcomes. *J Am Geriatr Soc.* 2016;64(7):1469-1474. doi:10.1111/jgs.14206
- Ebner N, von Haehling S. Why is iron deficiency recognised as an important comorbidity in heart failure? Card Fail Rev. 2019;5(3):173-175. doi:10.15420/cfr.2019.9.2
- 13. Data on file. Daiichi Sankyo Inc, Basking Ridge, NJ.
- 14. López-Vilella R, Lozano-Edo S, Arenas Martin P, et al. Impact of intravenous ferric carboxymaltose on heart failure with preserved and reduced ejection fraction. ESC Heart Fail. 2022;9(1):133-145. doi:10.1002/ehf2.13753
- **15.** Mistry R, Hosoya H, Kohut A, Ford P. Iron deficiency in heart failure, an underdiagnosed and undertreated condition during hospitalization. *Ann Hematol.* 2019;98(10):2293-2297. doi:10.1007/s00277-019-03777-w
- 16. Becher PM, Schrage B, Benson L, et al. Phenotyping heart failure patients for iron deficiency and use of intravenous iron therapy: data from the Swedish Heart Failure Registry. Eur J Heart Fail. 2021;23(11):1844-1854. doi:10.1002/ejhf.2338
- 17. Tsao CW, Aday AW, Almarzooq ZI, et al. Heart disease and stroke statistics—2022 update: a report from the American Heart Association. *Circulation*. 2022;145(8):e153-e639. doi:10.1161/CIR.0000000000001052
- von Haehling S, Ebner N, Evertz R, Ponikowski P, Anker S. Iron deficiency in heart failure: an overview. JACC Heart Fail. 2019;7(1):36-46. doi:10.1016/j.chf.2018.07.015
- Enjuanes C, Bruguera J, Grau M, et al. Iron status in chronic heart failure: impact on symptoms, functional class and submaximal exercise capacity. Rev Esp Cardiol (Engl Ed). 2016;69(3):247-255. doi:10.1016/j.rec.2015.08.018
- 20. Gevaert AB, Mueller S, Winzer EB, et al. Iron deficiency impacts diastolic function, aerobic exercise capacity, and patient phenotyping in heart failure with preserved ejection fraction: a subanalysis of the Optim-Ex-Clin study. Front Physiol. 2022;12:757268. doi:10.3389/fphys.2021.757268
- Klip IT, Comín-Colet J, Voors AA, et al. Iron deficiency in chronic heart failure: an international pooled analysis. Am Heart J. 2013;165(4):575-582.e3. doi:10.1016/j.ahj.2013.01.017
- 22. Dumitru I. Heart failure clinical presentation. Medscape. Updated March 2, 2021. Accessed September 12, 2023. http://emedicine.medscape.com/article/163062-clinical
- 23. Top Doctors®, United Kingdom. Iron Deficiency. Accessed August 23, 2023. https://www.topdoctors.co.uk/medical-dictionary/iron-deficiency#

- 24. Lam CSP, Doehner W, Comin-Colet J; IRON CORE Group. Iron deficiency in chronic heart failure: case-based practical guidance. ESC Heart Fail. 2018;5(5):764-771. doi:10.1002/ehf2.12333
- 25. Tang YD, Katz SD. Anemia in chronic heart failure: prevalence, etiology, clinical correlates, and treatment options. *Circulation*. 2006;113(20):2454-2461. doi:10.1161/ CIRCULATIONAHA.105.583666
- 26. McDonagh T, Damy T, Doehner W, et al. Screening, diagnosis and treatment of iron deficiency in chronic heart failure: putting the 2016 European Society of Cardiology heart failure guidelines into clinical practice. Eur J Heart Fail. 2018;20(12):1664-1672. doi:10.1002/ejhf.1305
- 27. Lewis GD, Molhotra R, Hernandez AF, et al. Effect of oral iron repletion on exercise capacity in patients with heart failure with reduced ejection fraction and iron deficiency: the IRONOUT HF randomized clinical trial. JAMA. 2017;317(19):1958-1966. doi:10.1001/jama.2017.5427
- 28. Ponikowski P, van Veldhuisen DJ, Comín-Colet J, et al. Beneficial effects of long-term intravenous iron therapy with ferric carboxymaltose in patients with symptomatic heart failure and iron deficiency. Eur Heart J. 2015;36(11):657-668. doi:10.1093/eurheartj/ehu385
- 29. Comín-Colet J, Enjuanes C, González G, et al. Iron deficiency is a key determinant of health-related quality of life in patients with chronic heart failure regardless of anaemia status. Eur J Heart Fail. 2013;15(10):1164-1172. doi:10.1093/eurjhf/hft083
- **30.** Iron-deficiency anemia. National Heart, Lung, and Blood Institute. Accessed August 23, 2023. https://www.nhlbi.nih.gov/health-topics/iron-deficiency-anemia
- 31. Padilla O, Abadie J. Blood tests: normal values. Table. In: Merck Manual: Professional Version. Merck & Co, Inc. Accessed: February 29, 2024. https://www.merckmanuals.com/professional/resources/normal-laboratory-values/blood-tests-normal-values
- **32.** Hemoglobin test. Mayo Clinic. Accessed August 23, 2023. https://www.mayoclinic.org/tests-procedures/hemoglobin-test/about/pac-20385075



IMPORTANT SAFETY INFORMATION

INDICATIONS

Injectafer® (ferric carboxymaltose injection) is indicated for the treatment of iron deficiency anemia (IDA) in adult and pediatric patients 1 year of age and older who have either intolerance or an unsatisfactory response to oral iron, and in adult patients who have non-dialysis dependent chronic kidney disease. Injectafer is also indicated for iron deficiency in adult patients with heart failure and New York Heart Association class II/III to improve exercise capacity.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

Injectafer is contraindicated in patients with hypersensitivity to Injectafer or any of its inactive components.

WARNINGS AND PRECAUTIONS

Symptomatic Hypophosphatemia Symptomatic hypophosphatemia with serious outcomes including osteomalacia and fractures requiring clinical intervention has been reported in patients treated with Injectafer in the post-marketing setting. These cases have occurred mostly after repeated exposure to Injectafer in patients with no reported history of renal impairment. However, symptomatic hypophosphatemia has been reported after one dose. Possible risk factors for hypophosphatemia include a history of gastrointestinal disorders associated with malabsorption of fat-soluble vitamins or phosphate, inflammatory bowel disease, concurrent or prior use of medications that affect proximal renal tubular function, hyperparathyroidism, vitamin D deficiency, malnutrition, and hereditary hemorrhagic telangiectasia (HHT or Osler-Weber-Rendu syndrome). In most cases, hypophosphatemia resolved within three months.

Correct pre-existing hypophosphatemia prior to initiating therapy with Injectafer. Monitor serum phosphate levels in patients at risk for chronic low serum phosphate. Check serum phosphate levels prior to a repeat course of treatment in patients at risk for low serum phosphate and in any patient who receives a second course of therapy within

three months. Treat hypophosphatemia as medically indicated.

Hypersensitivity Reactions

Serious hypersensitivity reactions, including anaphylactic-type reactions, some of which have been life-threatening and fatal, have been reported in patients receiving Injectafer. Patients may present with shock, clinically significant hypotension, loss of consciousness, and/or collapse. Monitor patients for signs and symptoms of hypersensitivity during and after Injectafer administration for at least 30 minutes and until clinically stable following completion of the infusion. Only administer Injectafer when personnel and therapies are immediately available for the treatment of serious hypersensitivity reactions. In clinical trials, serious anaphylactic/ anaphylactoid reactions were reported in 0.1% (2/1775) of subjects receiving Injectafer. Other serious or severe adverse reactions potentially associated with hypersensitivity which included, but were not limited to, pruritus, rash, urticaria, wheezing, or hypotension were reported in 1.5% (26/1775) of these subjects.

Hypertension

In clinical studies, hypertension was reported in 4% (67/1775) of subjects in clinical trials 1 and 2. Transient elevations in systolic blood pressure, sometimes occurring with facial flushing, dizziness, or nausea were observed in 6% (106/1775) of subjects in these two clinical trials. These elevations generally occurred immediately after dosing and resolved within 30 minutes. Monitor patients for signs and symptoms of hypertension following each Injectafer administration.

Laboratory Test Alterations

In the 24 hours following administration of Injectafer, laboratory assays may overestimate serum iron and transferrin bound iron by also measuring the iron in Injectafer.

ADVERSE REACTIONS

Adults

In two randomized clinical studies [Studies 1 and 2], a total of 1775 patients were exposed to Injectafer, 15 mg/kg of body weight, up to a maximum single dose of 750 mg of iron on two occasions, separated by at least 7 days, up to a cumulative dose of 1500 mg of iron. Adverse reactions reported by >2% of Injectafer-treated patients were nausea (7.2%); hypertension (4%); flushing (4%); injection site reactions (3%); erythema (3%); hypophosphatemia (2.1%); and dizziness (2.1%).

Pediatric

The safety of Injectafer in pediatric patients was evaluated in Study 3. Study 3 was a randomized, active-controlled study in which 40 patients (1 to 12 years of age: 10 patients, 12 to 17 years of age: 30 patients) received Injectafer 15 mg/kg to a maximum single dose of 750 mg (whichever was smaller) on Days 0 and 7 for a maximum total dose of 1500 mg; 38 patients evaluable for safety in the control arm received an age-dependent formulation of oral ferrous sulfate for 28 days. The median age of patients who received Injectafer was 14.5 years (range, 1-17); 83% were female; 88% White and 13% Black. The most common adverse reactions (≥4%) were hypophosphatemia (13%), injection site reactions (8%), rash (8%), headache (5%), and vomiting (5%).

Patients with Iron Deficiency and Heart Failure The safety of Injectafer was evaluated in adult patients with iron deficiency and heart failure in randomized controlled trials FAIR-HF (NCT00520780), CONFIRM-HF (NCT01453608) and AFFIRM-AHF (NCT02937454) in which 1016 patients received Injectafer versus 857 received placebo. The overall safety profile of Injectafer was consistent across the studied indications.

Post-Marketing Experience

The following adverse reactions have been identified during post approval use of Injectafer. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

The following adverse reactions have been reported from the post-marketing spontaneous reports with Injectafer: cardiac disorders: tachycardia; general disorders and administration site conditions: chest discomfort, chills, pyrexia; metabolism and nutrition disorders: hypophosphatemia; musculoskeletal and connective tissue disorders: arthralgia, back pain, hypophosphatemic osteomalacia; nervous system disorders: syncope; respiratory, thoracic and mediastinal disorders: dyspnea; skin and subcutaneous tissue disorders: angioedema, erythema, pruritus, urticaria; pregnancy: fetal bradycardia.

CLINICAL CONSIDERATIONS IN PREGNANCY

Untreated IDA in pregnancy is associated with adverse maternal outcomes such as postpartum anemia. Adverse pregnancy outcomes associated with IDA include increased risk for preterm delivery and low birth weight.

Severe adverse reactions including circulatory failure (severe hypotension, shock including in the context of anaphylactic reaction) may occur in pregnant women with parenteral iron products (such as Injectafer) which may cause fetal bradycardia, especially during the second and third trimester.

You are encouraged to report Adverse Drug Events to American Regent, Inc. at 1-800-734-9236 or to the FDA by visiting www.fda.gov/medwatch or calling 1-800-FDA-1088.



CHOOSE INJECTAFER TO TREAT IRON DEFICIENCY IN ADULT PATIENTS WITH

HF AND NYHA CLASS II/III1



Data

Injectafer is the **first and only FDA-approved IV iron** to demonstrate improvements in 2 key areas¹⁻⁶:

- Exercise capacity: improved 6MWT (change from baseline and placebo) at 24 weeks by 25 m¹
- **Iron parameters:** improved ferritin, TSAT, and Hb (change vs placebo and from baseline) by 269 ng/mL, 9%, and 0.6 g/dL, respectively, at week 24¹



Dose

Injectafer provides weight-based dosing and offers maintenance dosing beyond 6 weeks¹



Delivery

Injectafer is the only high-dose IV iron that can be administered intravenously through infusion or as an undiluted slow IV push¹⁻⁶



Dilution

Injectafer can be given up to 250 mL diluted for IV infusion or as a slow IV push (refer to the Full Prescribing Information for details)¹



Scan the QR code or <u>click here</u> to learn more about Injectafer



SELECTED SAFETY INFORMATION

CONTRAINDICATIONS

Injectafer is contraindicated in patients with hypersensitivity to Injectafer or any of its inactive components.

<u>Click here</u> to see accompanying Full Prescribing Information and see Important Safety Information throughout.



American Regent, Inc. is a member of the Daiichi Sankyo Group. Injectafer® and the Injectafer® logo are trademarks of Vifor (International) Inc., Switzerland. Injectafer® is manufactured under license from Vifor (International) Inc., Switzerland. Trademarks not owned by American Regent, Inc. or Vifor (International) are the property of their respective owners.

