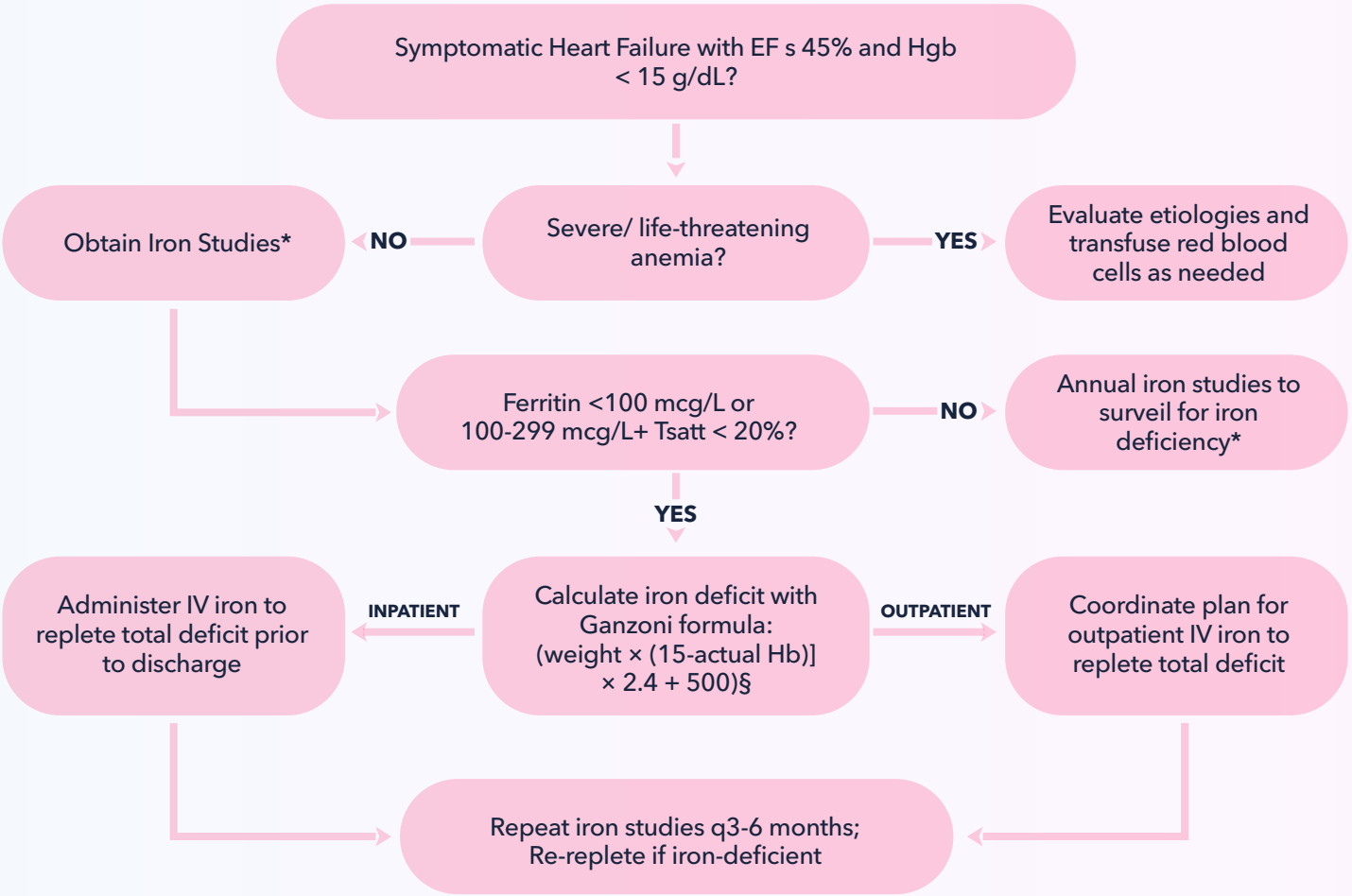
TREATMENT OF ID IN PATIENTS WITH HEART FAILURE

Guideline Recommendations

Iron Deficiency in HF	2022 AHA/ACC/HFSA Guideline forthe Management of Heart Failure		2023 Focused Update of the 2021 ESC Guidelines for the Diagnosis and Treatment of Acute and Chronic HF	
Target HF population	HFrEF and iron deficiency with or without anemia	HF and anemia	Symptomatic patients with LVEF <45% and iron deficiency, defined as serum ferritin <100ng/ml or serum ferritin 100-299 ng/mlwith TSAT <20%	Symptomatic HF patients recently hospitalized for HF and with LVEF <50% and iron deficiency defined as serum ferritin <100ng/ml or serum ferritin 100-299 ng/mlwith TSAT <20%
Recommendations	Intravenous iron replacement is reasonable to improve functional status and QOL	Erythropoietin-stimu-lating agents should not be used to improve morbidity and mortality	IV iron supplementation is recommended in symptom-atic patients with HFrEF and HFmrEF, and iron deficiency, to alleviate HF symptoms and improve quality of life	IV iron supplementation with ferric carboxymaltose or ferric derisomaltose should be considered in symptom-atic patients with HFrEF and HFmrEF, and iron deficiency,
Class of recommendation	2a	3:Harm	I	IIa
Level of recommendation	B-R	B-R	A	A

Algorithm for screening/diagnosis and treatment/follow-up of iron deficiency in patients with chronic heart failure.



Intravenous Iron Formulations								
Formulation (FDA Approval)	**Trade Name**	**Test Dose**	**Typical Dose Administered in a Single Setting**	**Typical Infusion Volume per Dose**	**Typical Duration of Administration for 1 Dose**	**Total Dose Option**	**FDA Indication**	**Evidence in HF**
(1991)	INFed	Yes	100 – 1000 mg	250 – 1000 mL	5 minutes for test dose followed by 1 hour observation period); 2-6 h for rest of dose	Yes	IDA,ID owing to blood loss	Retrospective, observational studies
Ferric gluconate (1999)	Ferrlecit	No	125 – 250 mg	110 – 250 mL	30 – 60 minutes	No*	HD	Retrospective, observational trials
Iron sucrose (2000)	Venofer	No	100 – 200 mg	100 – 250 mL	Slow IVP or infusion over 30 minutes	No*	CKD	Small RCTs; prospective observational trials
Ferumoxytol (2009)	Feraheme	No	510 mg	50 – 200 mL	At least 15 minutes	No*	CKD, IDA	None to date
Ferric carboxymaltose (2013 & 2023 additional FDA indication in HF)	Injectafer	No	750mg up to 1000 mg in clinical trials	15 – 250 mL	Slow IVP or infusion over at least 15minutes	No*	CKD, IDA **ID in adult patients with heart failure and NYHA class II/III to improve exercise capacity**	RCTs specifically conducted in patients with HFrEF
Ferric derisomaltose (2020)	Monoferric	No	20 mg/kg up to 2000 mg in clinical trials	100 – 500 mL	20 minutes	Yes	CKD, IDA	Subanalysis of RCT that included some HF patients; 1 large RCT

Hb = hemoglobin, HF = heart failure, HFrEF = heart failure with reduced ejection fraction, FCM = ferric carboxymaltose, HFmrEF = heart failure with mildly reduced ejection fraction
NYHA = New York Heart Association Functional Classification, QOL = quality of life, TSAT = transferrin saturation

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