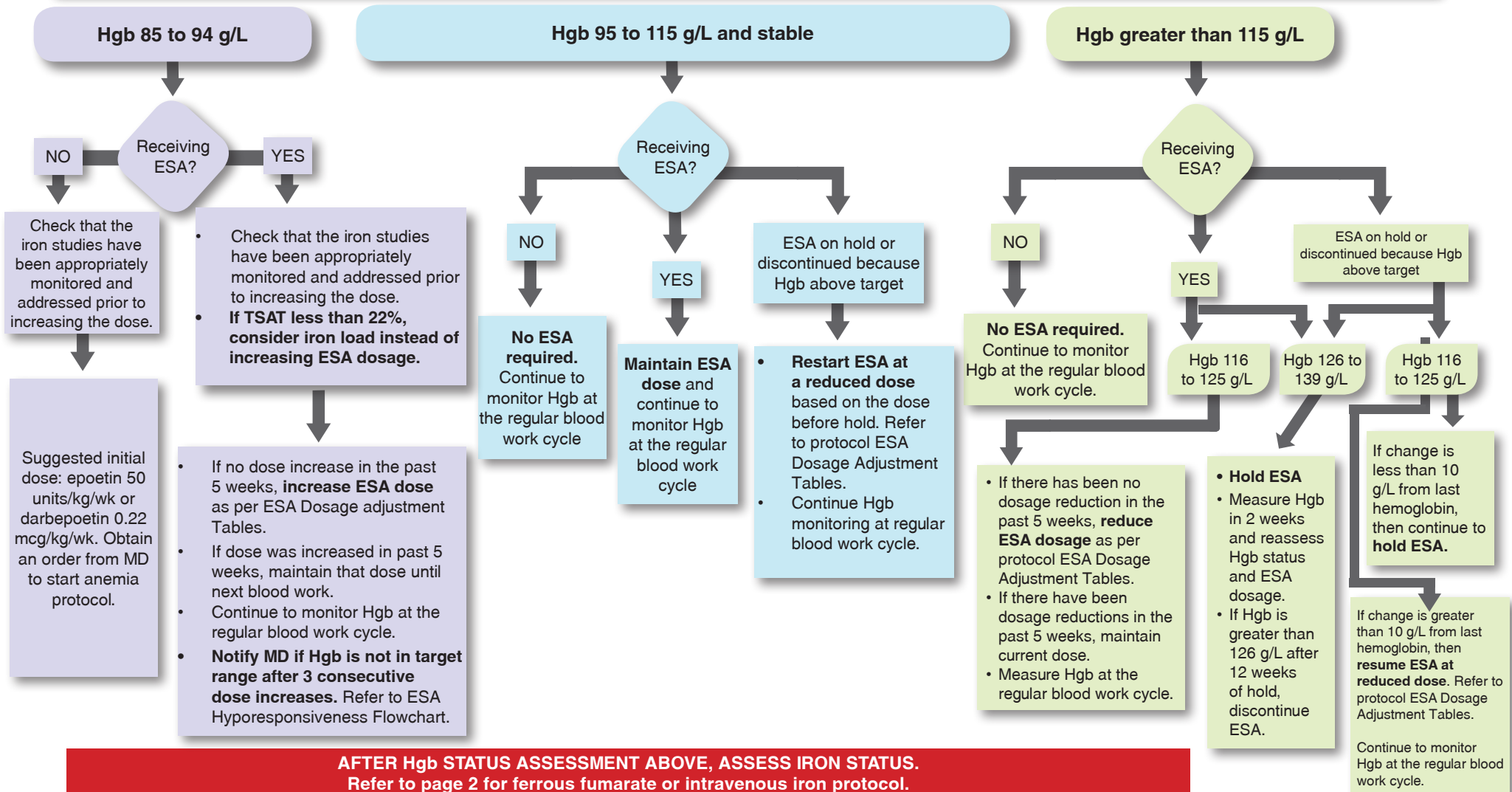


BCPRA CKD Non-Dialysis Anemia Management Protocol

The following protocol, on order of physician, transfers anemia management of CKD non-dialysis patients to non-physician staff (i.e. RNs and renal pharmacists). **The following protocol is intended to serve as a guide and cannot replace clinical judgement.** The recommendations included may be inappropriate for specific clinical situations (e.g. patients with hemochromatosis, thalassemia, PRCA, allergy to IV iron or an erythropoiesis stimulating agent (ESA), hx of stroke, active malignancy, hx of malignancy, etc.). The lowest ESA dosage to achieve acceptable Hgb range should be used. This algorithm is based on the assumption that the patient is compliant to medication and blood work. **Note: ESA refers to both epoetin alfa (Eprex®) and darbepoetin alfa (Aranesp®).**

Any change in Hgb greater than or equal to 15 g/L, OR if Hgb is less than 85 g/L OR if Hgb is greater than 139 g/L AND on ESA (or ESA on hold) → Notify MD



AFTER Hgb STATUS ASSESSMENT ABOVE, ASSESS IRON STATUS. Refer to page 2 for ferrous fumarate or intravenous iron protocol.

BCPRA CKD Non-Dialysis Anemia Management Protocol

PAGE 2: ASSESS IRON STATUS (Standard Iron Parameters — TSAT & Ferritin)

- If at anytime the serum ferritin is above 1000 mcg/L, or the patient is on IV antibiotics or has signs and symptoms of sepsis (e.g. temperature greater than 38°, chills, rigors, unexplained hypotension), notify the MD to assess ongoing iron use.

Notify MD if ferritin less than 20 mcg/L

TSAT less than 22%
REPLETE IRON STORES

If patient is currently not receiving iron therapy:

- Contact MD to start ferrous fumarate (e.g. 300 mg po HS)
- If TSAT less than 10%, order ferrous fumarate 300 mg po HS x 1 week, then 600 mg po HS

If patient is currently receiving oral iron therapy:

- Assess iron compliance and proper administration (empty stomach)
- Increase ferrous fumarate by 300 mg/day as tolerated (max. 900 mg/day)

If patient's Hgb greater than 115 g/L, decrease ferrous fumarate dosage to 300 mg po daily.

Notify MD if iron parameters remain low after 3 consecutive blood work cycles.

If oral iron ineffective or patient is intolerant, consider giving IV iron.

Measure TSAT and ferritin at next routine blood work cycle and reassess iron dosage regimen.

TSAT 22% to 49%
MAINTAIN IRON STORES

If receiving PO iron:
Continue current maintenance dose

If PO iron is currently on hold due to iron overload:
Consider restarting ferrous fumarate 300 mg po HS (this becomes new maintenance dose)

Measure TSAT and ferritin in 3 months and reassess iron dosage regimen

If patient is unable to tolerate or adhere to oral iron regimen:

Schedule IV iron regularly as per nephrologist's prescription. Measure TSAT and ferritin every 3 months (and at least 1 week after last IV iron dose).

Usual maximum single doses tolerated of common agents:

Iron sucrose (Venofer®) 300 mg IV over 3 hours
Iron dextran (DexIron®) 500 mg IV over 3 to 4 hours
Sodium ferric gluconate (Ferrlecit®) 125mg IV over 1 hour

TSAT greater than or equal to 50%
POSSIBLE IRON OVERLOAD

HOLD IRON

Measure TSAT and ferritin at next routine blood work cycle and reassess iron dosage regimen.

Note: Notify MD if iron indices remain high for 3 consecutive blood work cycles.

***If iron blood work appears unusual compared to previous results (e.g. replacement of iron stores, TSAT goes from less than 25% to greater than 49%) repeat the blood work before initiating next action.

CKD NON-DIALYSIS ANEMIA MANAGEMENT PROTOCOL: ESA DOSING ADJUSTMENT TABLES

The following tables provide guidance for most dosage adjustments. If a patient's Hgb cannot be maintained within the desired range with 3 consecutive dose modifications using the dosage schedule below, contact a nephrologist or renal pharmacist for advice. If a patient's erythropoiesis stimulating agent (ESA) dosage is not available in the tables below, please contact a nephrologist for ESA dosage modification. The lowest ESA dosage to maintain Hgb within acceptable range should be used.

Darbepoetin Alfa (Aranesp®) Dosage Adjustment Table

Pre-filled syringes available in CKD patients include: 10 mcg, 20 mcg, 30 mcg, 40 mcg, 50 mcg, 60 mcg, 80 mcg, 100 mcg, 130 mcg and 150 mcg.

Current Dose	Increase Dose*	Decrease Dose*
10 mcg subcut every 2 weeks	20 mcg subcut every 2 weeks	D/C, check Hgb in 2 weeks
20 mcg subcut every 2 weeks	30 mcg subcut every 2 weeks	10 mcg subcut every 2 weeks
30 mcg subcut every 2 weeks	40 mcg subcut every 2 weeks	20 mcg subcut every 2 weeks
40 mcg subcut every 2 weeks	50 mcg subcut every 2 weeks	30 mcg subcut every 2 weeks
50 mcg subcut every 2 weeks	60 mcg subcut every 2 weeks	40 mcg subcut every 2 weeks
60 mcg subcut every 2 weeks	80 mcg subcut every 2 weeks	50 mcg subcut every 2 weeks
80 mcg subcut every 2 weeks	100 mcg subcut every 2 weeks	60 mcg subcut every 2 weeks
100 mcg subcut every 2 weeks	130 mcg subcut every 2 weeks	80 mcg subcut every 2 weeks
130 mcg subcut every 2 weeks	150 mcg subcut every 2 weeks	100 mcg subcut every 2 weeks
150 mcg subcut every 2 weeks	100 mcg subcut <u>every 1 week</u>	130 mcg subcut every 2 weeks
100 mcg subcut <u>every 1 week</u>	130 mcg subcut <u>every 1 week</u>	150 mcg subcut every 2 weeks
130 mcg subcut <u>every 1 week</u>	150 mcg subcut <u>every 1 week</u>	100 mcg subcut <u>every 1 week</u>
150 mcg subcut <u>every 1 week</u>	No further increase, check with nephrologist	130 mcg subcut <u>every 1 week</u>

*For dosage increase or decrease, change interval to use up current syringes before starting new dosage. Refer to ESA Dosing Interval Adjustment Table.

Epoetin Alfa (Eprex®) Dosage Adjustment Table

Prefilled syringes available in CKD patients include: 1000 units, 2000 units, 3000 units, 4000 units, 5000 units, 6000 units, 8000 units and 10,000 units.

Current Dose	Increase Dose*	Decrease Dose*
1000 units subcut every 1 week	2000 units subcut every 1 week	D/C, check Hgb in 2 weeks
2000 units subcut every 1 week	3000 units subcut every 1 week	1000 unit subcut every 1 week
3000 units subcut every 1 week	4000 units subcut every 1 week	2000 units subcut every 1 week
4000 units subcut every 1 week	5000 units subcut every 1 week	3000 units subcut every 1 week
5000 units subcut every 1 week	6000 units subcut every 1 week	4000 units subcut every 1 week
6000 units subcut every 1 week	8000 units subcut every 1 week	5000 units subcut every 1 week
8000 units subcut every 1 week	10,000 units subcut every 1 week	6000 units subcut every 1 week
10,000 units subcut every 1 week	6000 units subcut <u>twice per week</u>	8000 units subcut every 1 week
6000 units subcut <u>twice per week</u>	8000 units subcut <u>twice per week</u>	10,000 units subcut every 1 week
8000 units subcut <u>twice per week</u>	10,000 units subcut <u>twice per week</u>	6000 units subcut <u>twice per week</u>
10,000 units subcut <u>twice per week</u>	8000 units subcut <u>3 times per week</u>	8000 units subcut <u>twice per week</u>
8000 units subcut <u>3 times per week</u>	10,000 units subcut <u>3 times per week</u>	10,000 units subcut <u>twice per week</u>
10,000 units subcut <u>3 times per week</u>	No further increase, check with nephrologist	8000 units subcut <u>3 times per week</u>

For dosage increase or decrease, change interval to use up current syringes before starting new dosage. Refer to ESA Dosing Interval Adjustment Table.

NON-DIALYSIS CKD ANEMIA MANAGEMENT PROTOCOL: ESA DOSING ADJUSTMENT TABLES

DARBEPOETIN ALFA (ARANESP®) DOSING INTERVAL ADJUSTMENT TABLE
(to use up current supplies at home)

CURRENT DOSE	INCREASED DOSE	DECREASED DOSE
	CHANGE INTERVAL TO	CHANGE INTERVAL TO
10 mcg every 2 weeks	Every 10 days	HOLD
20 mcg every 2 weeks		Every 21 days
30 mcg every 2 weeks		
40 mcg every 2 weeks		
50 mcg every 2 weeks		
60 mcg every 2 weeks		
80 mcg every 2 weeks		
100 mcg every 2 weeks		
130 mcg every 2 weeks		
150 mcg every 2 weeks		
100 mcg every 1 week	Every 5 days	
130 mcg every 1 week		
150 mcg every 1 week	Check with MD	

EPOETIN ALFA (EPREX®) DOSING INTERVAL ADJUSTMENT TABLE
(to use up current supplies at home)

CURRENT DOSE	INCREASED DOSE	DECREASED DOSE
	CHANGE INTERVAL TO	CHANGE INTERVAL TO
1,000 units every 1 week	Every 5 days	HOLD
2,000 units every 1 week		Every 10 days
3,000 units every 1 week		
4,000 units every 1 week		
5,000 units every 1 week		
6,000 units every 1 week		
8,000 units every 1 week		
10,000 units every 1 week		
6,000 units twice per week	Every 3 days	
8,000 units twice per week		
10,000 units twice per week		
8,000 units three times per week	Every 2 days	Every 3 days
10,000 units three times per week	Check with MD	