NORTHWEST Kidney Centers

Chronic Maintenance In-Center Hemodialysis Standing Orders – Darbepoetin (Aranesp™)

Darbepoetin (Aranesp™) ICD 10 code D63.1 Anemia in chronic kidney disease

Purpose:

To provide optimal management of ESRD related anemia for in-center hemodialysis patients through the use of darbepoetin alfa (Aranesp).

Hemoglobin Target Goal: 10 - 11 g/dl

Darbepoetin Dosing:

1. Calculate darbepoetin doses based on estimated dry weight and titrate to the following dosing steps:

Step	Dose
1.	10 mcg every month
2.	10 mcg every other week
3.	10 mcg weekly
4.	20 mcg weekly (combination of 10 mcg + 10 mcg)
5.	25 mcg weekly
6.	30 mcg weekly (combination of 10mcg + 10mcg + 10mcg)
7.	40 mcg weekly
8.	50 mcg weekly (combination of 25 mcg + 25 mcg)
9.	60 mcg weekly
10.	80 mcg weekly (combination of 40 mcg + 40 mcg)
11.	100 mcg weekly (ceiling dose)

Table 1

1. Do not change the dose more frequently than every four weeks except as noted under the darbepoetin dosing adjustment section below.
2. Administer darbepoetin (Aranesp) doses IV using prefilled syringes (unless patient allergic to latex) on the first dialysis of the week. If the patient misses that treatment administer the dose at the next session.
3. If a patient has an **ALLERGY TO LATEX- DO NOT USE** the prefilled syringes of darbepoetin (Aranesp). **Use single dose vials instead.**
   Note: Darbepoetin vials are single use and not available in 10 mcg vials. If allergic to Latex and protocol calls for steps 1, 2, 3, 4, or 6 contact the MD for alternate dosing to avoid drug wastage.
4. The maximum (ceiling) darbepoetin dose is 1.5 mcg/kg/week or 100 mcg/week - whichever is lower.

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Conversion from Erythropoetin to Darbepoetin:

Convert patients currently receiving erythropoietin to darbepoetin as follows:

Current Hgb	Conversion Formula
Less than 10 g/dL	Use a 1:250 (darbepoetin:erythropoietin) ratio (current weekly EPO dose/250) and round up to the nearest darbepoetin dosing step (table 1).
10-11 g/dL	Use a 1:300 (darbepoetin:erythropoietin) ratio (current weekly EPO dose/300) and round up to the nearest darbepoetin dosing step (table 1).
11.1 – 12 g/dL	Use a 1:400 (darbepoetin:erythropoietin) ratio (current weekly EPO dose/400) and round up to the nearest darbepoetin dosing step (table 1).
>12 g/dL	HOLD all ESAs if Hgb greater than 12 and check Hgb weekly
Patients on HOLD from EPO protocol	If EPO on HOLD from the EPO protocol, when Hgb less than or equal to 11.5 g/dL convert erythropoietin to darbepoetin as follows: 1. Calculate 75% of the most recent weekly EPO dose. (Most recent weekly EPO dose before HOLD x 0.75) = new weekly EPO dose. 2. Convert the new weekly EPO to darbepoetin dose using the above conversion formula appropriate for patient's Hgb.

Table 2

Initiating Darbepoetin for the ESA-Naïve Patient

1. Hemoglobin must be less than 10 g/dL to start the darbepoetin protocol.
2. Initial starting dose for new patients or established patients who have not received an ESA within the last 3 months and the Hgb is less than 10 g/dL: Start darbepoetin per nephrologists order or 0.3 mcg/kg/week (i.e. 0.3 mcg X dry weight rounded down to the nearest dosing step per Table 1).

Darbepoetin Dosing Adjustment

1. **Do not INCREASE** the darbepoetin dose more frequently than every 4 weeks unless:
   a. The Hgb falls from above 10 g/dL to below 10 g/dL with a Hgb change greater than 0.5 g/dL.
   b. The Hgb is 10-10.4 g/dL with a Hgb decrease greater than 1.0 g/dL.
2. The maximum (ceiling) darbepoetin dose is 1.5 mcg/kg/week or 100 mcg/week-whichever is lower.
3. Round doses based on dry weight up to closest dose step in cases of an increase and round down in cases of a decrease.
4. If the darbepoetin dose is greater than 60 mcg per week, evaluate for ESA resistance.

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5. Increase darbepoetin dose per protocol up to the maximum (ceiling) dose or no more than a 3 step dose increase from the current dose with any dose change – whichever is lower.
6. Titrate darbepoetin per the following table:

Darbepoetin Dosing Adjustment	
Hgb decreased by greater than or equal to 0.5 g/dl since last dose change	
Hgb (g/dl)	**Step Dose Change**
Less than 10	2 step dose increase (or at least 0.5 mcg/kg/week total dose)
10.0-10.9	1 step dose increase
11-12	No Change
Hgb increased/decreased by less than 0.5 g/dl since last dose change	
Hgb (g/dl)	**Step Dose Change**
Less than 9.5	2 step dose increase (or at least 0.25 mcg/kg/week total dose)
9.5-9.9	1 step dose increase
10.0-11.4	No Change
11.5-12	1 step dose decrease
Hgb increase greater than or equal to 0.5 g/dl since last dose change	
Hgb (g/dl)	**Step Dose Change**
Less than 9.5	2 step dose increase (or at least 0.25 mcg/kg/week total dose)
9.5-9.9	1 step dose increase
10-10.4	No Change
10.5-10.9	1 step decrease
11-12	2 step decrease
Hgb (g/dl)	**Dose Change**
Greater than 12	1. If Darbepoetin > or = 60mcg/week, hold one dose, then resume with a 1 step decrease the following week. Check bi-weekly hgb x 4. If hgb still >12 hold one dose, then resume at same dose if less than 4 weeks since last change or at 1 step lower if 4 or more weeks since last change. 2. If Darbepoetin < 60mcg / week, hold and check hgb weekly. Resume with a 1 step decrease when the Hgb is less than or equal to 11.0 g/dL. 3. If the Hgb remains greater than or equal to 12 g/dL for more than 6 weeks, resume routine lab testing.
If Hgb is increased or decreased more than 0.5 g/dl since the last Hgb level recheck Hgb in two weeks	

Table 3

Labs:

1. Draw CBC first week of the month.
2. If the Hgb decreases or increases more than 2 g/dl repeat the Hgb on the next run and call the MD.
3. If darbepoetin is on HOLD draw Hgb weekly as noted above.

_____ _____
Physician Name (Please Print) RN Name (Please Print)

_____ _____ _____
Physician signature RN signature Date
(see referral sheet and/or initial HD orders)

Patient Name_____ **NKC#**_____