

# Methoxy polyethylene glycol-epoetin beta (Mircera<sup>®</sup>) Protocol

**Methoxy polyethylene glycol-epoetin beta (Mircera<sup>®</sup>)** ICD 10 code D63.1

Anemia in chronic kidney disease

**Purpose:** To provide optimal management of ESRD related anemia in dialysis patients

**Hemoglobin Target Goal:** 10.0-11.0 g/dl

**Methoxy polyethylene glycol-epoetin beta Dosing:**

Doses are based on estimated dry weight and rounded to the following steps:

Step	Dose
1	30 mcg every four weeks
2	50 mcg every four weeks
3	30 mcg every two weeks
4	50 mcg every two weeks
5	60 mcg every two weeks (30 mcg + 30 mcg)
6	75 mcg every two weeks
7	100 mcg every two weeks
8	150 mcg every two weeks
9	200 mcg every two weeks

Table 1

1. Methoxy polyethylene glycol-epoetin (Mircera<sup>®</sup>) will be increased and decreased in 1-step or 2-step increments, based on scale above.
2. Mircera<sup>®</sup> will be administered IV to HD patients, and SC to PD patients.
3. Mircera<sup>®</sup> ceiling is 200 mcg every two weeks (or 3.0 mcg/kg/2 weeks, whichever is lower). Orders outside listed steps require facility medical director or CMO approval.
4. When a patient with a darbepoetin (Aranesp) or erythropoietin order switches to Mircera<sup>®</sup>, discontinue darbepoetin (Aranesp) or erythropoietin order.
5. Instructions for when patient is on ESA hold: See Table 3 or 4 to convert previous ESA dosing to Mircera<sup>®</sup> Step, then see Table 1 and decrease 1 Step.

**Initiating Mircera<sup>®</sup> for new patients or ESA naïve patients**

1. Iron repletion to tsat > 25%
2. AND
  - a. If hgb < 10 g/dl, then start Mircera<sup>®</sup> at 0.6 mcg/kg/2 weeks, and round down to closest step per Table 1.

**Patient Name** \_\_\_\_\_ **NKC#** \_\_\_\_\_

- b. If hgb 10.0-10.4 g/dl, then start Mircera® at 0.2 mcg/kg/2weeks and round down to closest step per Table 1.
- c. If hgb >= 10.5 g/dl, then do not start Mircera® until patient meets criteria

**Mircera® Dosing Adjustment**

1. Do not change Mircera® dose more frequently than every 4 weeks EXCEPT:
  - a. If hgb falls from above 10 to less than 10, increase dose after 2 weeks
  - b. If hgb is 11-12 and patient has every other week Mircera® order, decrease dose after 2 weeks
  - c. If hgb > 12, hold Mircera® and check hgb every week for in-center patients, and at next redraw for home dialysis patients. Resume Mircera® with 1-step decrease as soon as hgb is < 11.5 and last dose was administered 2 weeks ago or more. If hgb remains >= 12 for more than 2 months, return to regular hgb testing policy.
2. Titrate Mircera® per the following table for patients who have a Mircera® order and had not been changed in the last 4 weeks:

<b>Mircera® Dosing Adjustment</b>	
<b>Hgb decreased by greater than or equal to 0.5 g/dl since last dose change</b>	
<b>Hgb (g/dl)</b>	<b>Step Dose Change</b>
Less than 10	2 step dose increase
10.0-10.9	1 step dose increase
11-12	No Change
<b>Hgb increased/decreased by less than 0.5 g/dl since last dose change</b>	
<b>Hgb (g/dl)</b>	<b>Step Dose Change</b>
Less than 9.5	2 step dose increase
9.5-9.9	1 step dose increase
10.0-10.4	1 step dose increase, if hgb decreased; do not change if hgb increased or stayed the same
10.5-11.4	No change
11.5-12	1 step dose decrease
<b>Hgb increased greater than or equal to 0.5 g/dl since last dose change</b>	
<b>Hgb (g/dl)</b>	<b>Step Dose Change</b>
Less than 10	1 step dose increase
10-10.4	No Change
10.5-10.9	1 step decrease
11-12	2 step decrease
<b>Hgb (g/dl)</b>	<b>Dose Change</b>
<b>Greater than 12 g/dl</b>	Hold Mircera; check hgb every 2 weeks for home dialysis patients, and every week for in-center patients. (see 1c above.)
<b>If Hgb is increased or decreased at least 1.0 g/dl since the last Hgb level; recheck Hgb within next 2 dialysis treatments for in-center HD; at next redraw for home patients</b>	

Table 2

Patient Name \_\_\_\_\_ NKC# \_\_\_\_\_

**Conversion from darbepoetin or erythropoietin to Mircera®**

Convert darbepoetin or erythropoietin to appropriate dose of Mircera®, per conversion dose chart below. Convert to Mircera® when the next ESA dose is due.

<b>Erythropoietin to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart</b>		
Epogen Dose (U) per week - total	Mircera® Dose	
	Dose (mcg)	Frequency
< 2000	30	Every 4 weeks
2000 - < 3000	50	Every 4 weeks
3000 - < 5000	30	Every 2 weeks
5000 - < 8000	50	Every 2 weeks
8000 - < 11,000	60	Every 2 weeks
11,000 - < 18,000	75	Every 2 weeks
18,000 - < 27,000	100	Every 2 weeks
27,000 - < 42,000	150	Every 2 weeks
>= 42,000	200	Every 2 weeks

Table 3

<b>Darbepoetin (Aranesp) to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart</b>		
Darbepoetin Dose (mcg) per week - total	Mircera® Dose	
	Dose (mcg)	Frequency
< 10	50	Every 4 weeks
10 - <20	30	Every 2 weeks
20 - <30	50	Every 2 weeks
30 - < 40	60	Every 2 weeks
40 - < 50	75	Every 2 weeks
50 - < 60	100	Every 2 weeks
60 - < 100	150	Every 2 weeks
>= 100	200	Every 2 weeks

Table 4

**Labs:**

1. Draw CBC per routine lab orders.

\_\_\_\_\_  
Physician Name (Please Print)

\_\_\_\_\_  
RN Name (Please Print)

\_\_\_\_\_  
Physician signature  
(see referral sheet)

\_\_\_\_\_  
RN signature

\_\_\_\_\_  
Date

**Patient Name** \_\_\_\_\_ **NKC#** \_\_\_\_\_