

Methoxy polyethylene glycol-epoetin beta (Mircera[®]) Protocol

Methoxy polyethylene glycol-epoetin beta (Mircera[®]) 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 <i>four</i> weeks
2	50 mcg every <i>four</i> 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[®]) will be increased and decreased in 1-step or 2-step increments, based on scale above.
2. Mircera[®] will be administered IV to in-center hemodialysis patients, and SQ to home dialysis patients.
3. Mircera[®] 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.

Initiating Mircera[®] for new patients or ESA naïve patients

For new patients or established patients who have not received an ESA within the last 3 months, initiate as follows:

1. Iron repletion per iron standing orders
2. AND
 - a. If Hgb < 10 g/dL, then start Mircera[®] at 0.6 mcg/kg/2 weeks, and round down to closest step per Table 1 but no less than 30 mcg every 2 weeks (Step 3).
 - 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 but no less than 30 mcg every 2 weeks (Step 3).
 - a. If Hgb >= 10.5 g/dL, then do not start Mircera[®] until patient meets criteria.

Patient Name _____ **NKC#** _____

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Mircera® Dosing Adjustment

1. Do not change Mircera® dose more frequently than every 4 weeks EXCEPT:
 - a. If Hgb falls from above 10 g/dL to less than 10 g/dL, increase dose after 2 weeks.
 - b. If Hgb is already less than 10 g/dL and drops greater than 0.5 g/dL, increase dose after 2 weeks.
 - c. If Hgb is 11-11.9 g/dL and patient has every other week Mircera® order, decrease dose after 2 weeks
 - d. If Hgb \geq 12 g/dL, 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 g/dL and last dose was administered 2 weeks ago or more. If Hgb remains \geq 12 g/dL 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:

<u>Mircera® Dosing Adjustment</u>	
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
10.0-10.9	1 step dose increase
11-11.9	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
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
11.5-11.9	1 step dose decrease
Hgb increased greater than or equal to 0.5 g/dL since last dose change	
Hgb (g/dL)	Step Dose Change
Less than 10	1 step dose increase
10-10.4	No Change
10.5-10.9	1 step decrease
11-11.9	2 step decrease
Hgb (g/dL)	Dose Change
Greater than or equal to 12 g/dL	Hold Mircera; check Hgb at next redraw for home dialysis patients, and every week for in-center patients. (see 1c above.)
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	

Table 2

Conversion from darbepoetin or erythropoietin to Mircera®

1. When a patient with a darbepoetin (Aranesp) or erythropoietin order switches to Mircera®, discontinue darbepoetin (Aranesp) or erythropoietin order.
2. Convert darbepoetin or erythropoietin to appropriate dose of Mircera®, per conversion dose chart below. Convert to Mircera® when the next ESA dose is due.

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- If ESA is on HOLD from another protocol, wait until Hgb is less than 11.5 g/dL, then convert ESA as follows: See Table 3 or 4 to convert previous ESA dosing to Mircera® Step, then see Table 1 and decrease 1 Step.

Erythropoietin to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart		
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

Darbepoetin (Aranesp) to Methoxy Polyethylene Glycol Epoetin-beta Conversion Dose Chart		
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:

- Draw CBC per routine lab orders.

Suzanne Watnick, MD

Physician Name (Please Print)

RN Name (Please Print)

Physician signature

RN signature

Date

Patient Name _____ **NKC#** _____