NORTHWEST Kidney Centers

# 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 *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®) 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 above 200mcg every two weeks 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 30 mcg every 2 weeks (Step 3).
   c. If Hgb >= 10.5 g/dL, then do not start Mircera® until patient meets criteria.

**Patient Name**_____ **NKC#** _____

**Mircera® Dosing Adjustment**

1. Titrate Mircera® per the following table for patients who have a Mircera® order and had not been changed in the last 4 weeks:

| **Mircera® 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 |
| 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 | If Hgb decreased, do 1 step dose increase.<br>If Hgb increased or stayed the same do NOT change |
| 10.5-11.4 | No change |
| 11.5-11.9 | 1 step dose decrease; if patient is on Step 1, do not HOLD |
| **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 |
| 10.5-11.9 | 1 step decrease; if patient is on Step 1, do not HOLD |
| **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. |
| **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 and at next redraw for home patients.** Follow the algorithm based on the results of the recheck, e.g., if the value remains the same as the first draw, then follow the algorithm for no change. | |

Table 2

2. 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 >= 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 < 11.8 g/dL and last dose was administered 2 weeks ago or more. If Hgb remains >= 12 g/dL for more than 2 months, return to regular Hgb testing policy.
3. Post hospitalization: check Hgb at the first treatment after hospitalization and pre-hospitalization dose will be administered if patient is due for Mircera. When Hgb is back, then titrate Mircera as needed per Table 2 above.

**Patient Name**_____**NKC#** _____

## 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.
3. If ESA is on HOLD from another protocol, wait until Hgb is less than 11.8g/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.

Matthew Rivara, MD
Physician Name (Please Print)

Physician signature

Date

**Patient Name** **NKC#**