

# IP MODIFIED CYBORDEX

Types: ONCOLOGY TREATMENT

Synonyms: MM, MULTIPLE, MYELOMA, CYCLO, CYTOX, BORTEZ, VEL

Cycle 1	Repeat 1 time	Cycle length: 28 days
<b>Day 1</b> Perform every 1 day x1		
<b>Provider Communication</b>		
<b>ONC PROVIDER COMMUNICATION 5</b> Interval: Once Occurrences: -- Comments: Use baseline weight to calculate dose. Adjust dose for weight gains/losses of greater than or equal to 10%.		
<b>Labs</b>		
<input checked="" type="checkbox"/> <b>COMPREHENSIVE METABOLIC PANEL</b> Interval: Once Occurrences: --		
<input checked="" type="checkbox"/> <b>CBC WITH PLATELET AND DIFFERENTIAL</b> Interval: Once Occurrences: --		
<input checked="" type="checkbox"/> <b>MAGNESIUM LEVEL</b> Interval: Once Occurrences: --		
<input checked="" type="checkbox"/> <b>LDH</b> Interval: Once Occurrences: --		
<input checked="" type="checkbox"/> <b>URIC ACID LEVEL</b> Interval: Once Occurrences: --		
<input checked="" type="checkbox"/> <b>PHOSPHORUS LEVEL</b> Interval: Once Occurrences: --		
<b>Nursing Orders</b>		
<b>TREATMENT CONDITIONS 7</b> Interval: Once Occurrences: -- Comments: HOLD and notify provider if ANC LESS than 1000; Platelets LESS than 100,000.		
<b>Nursing Orders</b>		
<b>ONC NURSING COMMUNICATION 51</b> Interval: Once Occurrences: -- Comments: HOLD Bortezomib and notify provider if Hgb is LESS than or equal to *** g/dL.		
<b>Vitals</b>		
<b>ONC NURSING COMMUNICATION 50</b> Interval: Once Occurrences: -- Comments: 1) Check vital signs (BP, temperature, pulse, and respirations) prior to and 30 minutes after Bortezomib administration.  2) If systolic BP, 30 minutes after Bortezomib infusion, drops more than 30 mmHg, or if systolic BP is less than 90, please contact MD.		
<b>Line Flush</b>		
<b>sodium chloride 0.9 % flush 20 mL</b> Dose: 20 mL Route: intravenous PRN Start: S		

**Nursing Orders**

**sodium chloride 0.9 % infusion 250 mL**

Dose: 250 mL      Route: intravenous      once @ 30 mL/hr for 1 dose  
 Start: S  
 Instructions:  
 To keep vein open.

**Pre-Medications**

**ondansetron (ZOFRAN) injection 8 mg**

Dose: 8 mg      Route: intravenous      once for 1 dose  
 Start: S

**ondansetron (ZOFRAN) tablet 16 mg**

Dose: 16 mg      Route: oral      once for 1 dose  
 Start: S

**ondansetron (ZOFRAN) 16 mg in dextrose 5% 50 mL IVPB**

Dose: 16 mg      Route: intravenous      once over 15 Minutes for 1 dose  
 Start: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Main Ingredient	No
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	50 mL	Always	Yes

**Pre-Medications**

**dexamethasone (DECADRON) tablet 40 mg**

Dose: 40 mg      Route: oral      once for 1 dose

**Provider Communication**

**ONC PROVIDER COMMUNICATION**

Interval: Once      Occurrences: --  
 Comments: Please go to Meds & Orders to order:  
 Zofran 8 mg po BID for 5 Doses, beginning on Day 1 at 2100.  
 Zofran 8 mg po BID for 5 Doses, beginning on Day 8 at 2100.  
 Zofran 8 mg po BID for 5 Doses, beginning on Day 15 at 2100.  
 Zofran 8 mg po BID for 5 Doses, beginning on Day 22 at 2100.

**Chemotherapy**

**cyclophosphamide (CYTOXAN) 300 mg/m2 in sodium chloride 0.9 % 100 mL chemo IVPB**

Dose: 300 mg/m2      Route: intravenous      once over 30 Minutes for 1 dose  
 Offset: 30 Minutes

Instructions:  
 DRUG IS AN IRRITANT. Rapid infusion may result in dizziness, nasal/sinus congestion, and/or nasal burning.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CYCLOPHOSPHAMIDE 1 GRAM INTRAVENOUS SOLUTION	Medications	300 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	Yes	Yes

SOLUTION  
 DEXTROSE 5 % IN QS Base 100 mL No Yes  
 WATER (D5W)  
 INTRAVENOUS  
 SOLUTION

© **cyclophosphamide (CYTOXAN) chemo capsule  
 300 mg/m2 (Treatment Plan)**

Dose: 300 mg/m2      Route: oral      once for 1 dose  
 Offset: 30 Minutes

Chemotherapy

**bortezomib (VelCADE) 1.6 mg/m2 in sodium  
 chloride 0.9 % chemo injection**

Dose: 1.6 mg/m2      Route: subcutaneous      once for 1 dose  
 Start: S      End: S

Instructions:

DRUG IS AN IRRITANT. Administer drug slowly to prevent burning upon administration. A minimum of 72 hours between doses is recommended.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	BORTEZOMIB 3.5 MG SOLUTION FOR INJECTION	Medications	1.6 mg/m2	Main Ingredient	No
	SODIUM CHLORIDE 0.9 % INJECTION SOLUTION	Base		Always	Yes

Hematology & Oncology Hypersensitivity Reaction Standing Order

**ONC NURSING COMMUNICATION 82**

Interval: Until discontinued

Occurrences: --

Comments:

- Grade 1 - MILD Symptoms (cutaneous and subcutaneous symptoms only – itching, flushing, periorbital edema, rash, or runny nose)
1. Stop the infusion.
  2. Place the patient on continuous monitoring.
  3. Obtain vital signs.
  4. Administer Normal Saline at 50 mL per hour using a new bag and new intravenous tubing.
  5. If greater than or equal to 30 minutes since the last dose of Diphenhydramine, administer Diphenhydramine 25 mg intravenous once.
  6. If less than 30 minutes since the last dose of Diphenhydramine, administer Fexofenadine 180 mg orally and Famotidine 20 mg intravenous once.
  7. Notify the treating physician.
  8. If no improvement after 15 minutes, advance level of care to Grade 2 (Moderate) or Grade 3 (Severe).
  9. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

**ONC NURSING COMMUNICATION 83**

Interval: Until discontinued

Occurrences: --

Comments:

- Grade 2 – MODERATE Symptoms (cardiovascular, respiratory, or gastrointestinal symptoms – shortness of breath, wheezing, nausea, vomiting, dizziness, diaphoresis, throat or chest tightness, abdominal or back pain)
1. Stop the infusion.
  2. Notify the CERT team and treating physician immediately.

3. Place the patient on continuous monitoring.
4. Obtain vital signs.
5. Administer Oxygen at 2 L per minute via nasal cannula. Titrate to maintain O<sub>2</sub> saturation of greater than or equal to 92%.
6. Administer Normal Saline at 150 mL per hour using a new bag and new intravenous tubing.
7. Administer Hydrocortisone 100 mg intravenous (if patient has allergy to Hydrocortisone, please administer Dexamethasone 4 mg intravenous), Fexofenadine 180 mg orally and Famotidine 20 mg intravenous once.
8. If no improvement after 15 minutes, advance level of care to Grade 3 (Severe).
9. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

#### ONC NURSING COMMUNICATION 4

Interval: Until discontinued

Occurrences: --

Comments:

Grade 3 – SEVERE Symptoms (hypoxia, hypotension, or neurologic compromise – cyanosis or O<sub>2</sub> saturation less than 92%, hypotension with systolic blood pressure less than 90 mmHg, confusion, collapse, loss of consciousness, or incontinence)

1. Stop the infusion.
2. Notify the CERT team and treating physician immediately.
3. Place the patient on continuous monitoring.
4. Obtain vital signs.
5. If heart rate is less than 50 or greater than 120, or blood pressure is less than 90/50 mmHg, place patient in reclined or flattened position.
6. Administer Oxygen at 2 L per minute via nasal cannula. Titrate to maintain O<sub>2</sub> saturation of greater than or equal to 92%.
7. Administer Normal Saline at 1000 mL intravenous bolus using a new bag and new intravenous tubing.
8. Administer Hydrocortisone 100 mg intravenous (if patient has allergy to Hydrocortisone, please administer Dexamethasone 4 mg intravenous) and Famotidine 20 mg intravenous once.
9. Administer Epinephrine (1:1000) 0.3 mg subcutaneous.
10. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

#### **diphenhydramine (BENADRYL) injection 25 mg**

Dose: 25 mg                      Route: intravenous                      PRN  
Start: S

#### **fexofenadine (ALLEGRA) tablet 180 mg**

Dose: 180 mg                      Route: oral                      PRN  
Start: S

#### **famotidine (PEPCID) 20 mg/2 mL injection 20 mg**

Dose: 20 mg                      Route: intravenous                      PRN  
Start: S

#### **hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg**

Dose: 100 mg                      Route: intravenous                      PRN

#### **dexamethasone (DECADRON) injection 4 mg**

Dose: 4 mg                      Route: intravenous                      PRN  
Start: S

#### **epinephrine (ADRENALIN) 1 mg/10 mL ADULT injection syringe 0.3 mg**

Dose: 0.3 mg                      Route: subcutaneous                      PRN

Start: S

Discharge Nursing Orders

**sodium chloride 0.9 % flush 20 mL**

Dose: 20 mL                      Route: intravenous                      PRN

**HEParin, porcine (PF) injection 500 Units**

Dose: 500 Units                      Route: intra-catheter                      once PRN

Start: S

Instructions:

Concentration: 100 units/mL. Heparin flush for  
Implanted Vascular Access Device  
maintenance.

Days 8,15,22

Perform every 7 days x3

Labs

**COMPREHENSIVE METABOLIC PANEL**

Interval: Once                      Occurrences: --

**CBC WITH PLATELET AND DIFFERENTIAL**

Interval: Once                      Occurrences: --

**MAGNESIUM LEVEL**

Interval: Once                      Occurrences: --

**LDH**

Interval: Once                      Occurrences: --

**URIC ACID LEVEL**

Interval: Once                      Occurrences: --

**PHOSPHORUS LEVEL**

Interval: Once                      Occurrences: --

Nursing Orders

**TREATMENT CONDITIONS 7**

Interval: Once                      Occurrences: --

Comments:                      HOLD and notify provider if ANC LESS than 1000; Platelets LESS than 100,000.

Nursing Orders

**ONC NURSING COMMUNICATION 51**

Interval: Once                      Occurrences: --

Comments:                      HOLD Bortezomib and notify provider if Hgb is LESS than or equal to \*\*\* g/dL.

Vitals

**ONC NURSING COMMUNICATION 50**

Interval: Once                      Occurrences: --

Comments:                      1) Check vital signs (BP, temperature, pulse, and respirations) prior to and 30 minutes after Bortezomib administration.

2) If systolic BP, 30 minutes after Bortezomib infusion, drops more than 30 mmHg, or if systolic BP is less than 90, please contact MD.

Nursing Orders

**sodium chloride 0.9 % infusion 250 mL**

Dose: 250 mL                      Route: intravenous                      once @ 30 mL/hr for 1 dose

Start: S

Instructions:  
To keep vein open.

Pre-Medications

**ondansetron (ZOFRAN) injection 8 mg**

Dose: 8 mg                      Route: intravenous                      once for 1 dose  
Start: S

**ondansetron (ZOFRAN) tablet 16 mg**

Dose: 16 mg                      Route: oral                      once for 1 dose  
Start: S

**ondansetron (ZOFRAN) 16 mg in dextrose 5% 50 mL IVPB**

Dose: 16 mg                      Route: intravenous                      once over 15 Minutes for 1 dose  
Start: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Main Ingredient	No
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	50 mL	Always	Yes

Pre-Medications

**dexamethasone (DECADRON) tablet 40 mg**

Dose: 40 mg                      Route: oral                      once for 1 dose

Chemotherapy

**cyclophosphamide (CYTOXAN) 300 mg/m2 in sodium chloride 0.9 % 100 mL chemo IVPB**

Dose: 300 mg/m2                      Route: intravenous                      once over 30 Minutes for 1 dose  
Offset: 30 Minutes

Instructions:  
DRUG IS AN IRRITANT. Rapid infusion may result in dizziness, nasal/sinus congestion, and/or nasal burning.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CYCLOPHOSPHAMIDE 1 GRAM INTRAVENOUS SOLUTION	Medications	300 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	100 mL	No	Yes

**cyclophosphamide (CYTOXAN) chemo capsule 300 mg/m2 (Treatment Plan)**

Dose: 300 mg/m2                      Route: oral                      once for 1 dose  
Offset: 30 Minutes

Chemotherapy

**bortezomib (VelCADE) 1.6 mg/m2 in sodium chloride 0.9 % chemo injection**

Dose: 1.6 mg/m2                      Route: subcutaneous                      once for 1 dose

Start: S End: S

Instructions:

DRUG IS AN IRRITANT. Administer drug slowly to prevent burning upon administration. A minimum of 72 hours between doses is recommended.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	BORTEZOMIB 3.5 MG SOLUTION FOR INJECTION	Medications	1.6 mg/m2	Main Ingredient	No
	SODIUM CHLORIDE 0.9 % INJECTION SOLUTION	Base		Always	Yes

Hematology & Oncology Hypersensitivity Reaction Standing Order

**ONC NURSING COMMUNICATION 82**

Interval: Until discontinued Occurrences: --

Comments:

Grade 1 - MILD Symptoms (cutaneous and subcutaneous symptoms only – itching, flushing, periorbital edema, rash, or runny nose)

1. Stop the infusion.
2. Place the patient on continuous monitoring.
3. Obtain vital signs.
4. Administer Normal Saline at 50 mL per hour using a new bag and new intravenous tubing.
5. If greater than or equal to 30 minutes since the last dose of Diphenhydramine, administer Diphenhydramine 25 mg intravenous once.
6. If less than 30 minutes since the last dose of Diphenhydramine, administer Fexofenadine 180 mg orally and Famotidine 20 mg intravenous once.
7. Notify the treating physician.
8. If no improvement after 15 minutes, advance level of care to Grade 2 (Moderate) or Grade 3 (Severe).
9. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

**ONC NURSING COMMUNICATION 83**

Interval: Until discontinued Occurrences: --

Comments:

Grade 2 – MODERATE Symptoms (cardiovascular, respiratory, or gastrointestinal symptoms – shortness of breath, wheezing, nausea, vomiting, dizziness, diaphoresis, throat or chest tightness, abdominal or back pain)

1. Stop the infusion.
2. Notify the CERT team and treating physician immediately.
3. Place the patient on continuous monitoring.
4. Obtain vital signs.
5. Administer Oxygen at 2 L per minute via nasal cannula. Titrate to maintain O2 saturation of greater than or equal to 92%.
6. Administer Normal Saline at 150 mL per hour using a new bag and new intravenous tubing.
7. Administer Hydrocortisone 100 mg intravenous (if patient has allergy to Hydrocortisone, please administer Dexamethasone 4 mg intravenous), Fexofenadine 180 mg orally and Famotidine 20 mg intravenous once.
8. If no improvement after 15 minutes, advance level of care to Grade 3 (Severe).
9. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

**ONC NURSING COMMUNICATION 4**

Interval: Until discontinued

Occurrences: --

Comments:

Grade 3 – SEVERE Symptoms (hypoxia, hypotension, or neurologic compromise – cyanosis or O<sub>2</sub> saturation less than 92%, hypotension with systolic blood pressure less than 90 mmHg, confusion, collapse, loss of consciousness, or incontinence)

1. Stop the infusion.
2. Notify the CERT team and treating physician immediately.
3. Place the patient on continuous monitoring.
4. Obtain vital signs.
5. If heart rate is less than 50 or greater than 120, or blood pressure is less than 90/50 mmHg, place patient in reclined or flattened position.
6. Administer Oxygen at 2 L per minute via nasal cannula. Titrate to maintain O<sub>2</sub> saturation of greater than or equal to 92%.
7. Administer Normal Saline at 1000 mL intravenous bolus using a new bag and new intravenous tubing.
8. Administer Hydrocortisone 100 mg intravenous (if patient has allergy to Hydrocortisone, please administer Dexamethasone 4 mg intravenous) and Famotidine 20 mg intravenous once.
9. Administer Epinephrine (1:1000) 0.3 mg subcutaneous.
10. Assess vital signs every 15 minutes until resolution of symptoms or otherwise ordered by covering physician.

**diphenhydRAMINE (BENADRYL) injection 25 mg**Dose: 25 mg                      Route: intravenous                      PRN  
Start: S**fexofenadine (ALLEGRA) tablet 180 mg**Dose: 180 mg                      Route: oral                                      PRN  
Start: S**famotidine (PEPCID) 20 mg/2 mL injection 20 mg**Dose: 20 mg                      Route: intravenous                      PRN  
Start: S**hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg**

Dose: 100 mg                      Route: intravenous                      PRN

**dexamethasone (DECADRON) injection 4 mg**Dose: 4 mg                              Route: intravenous                      PRN  
Start: S**epINEPHrine (ADRENALIN) 1 mg/10 mL ADULT injection syringe 0.3 mg**Dose: 0.3 mg                      Route: subcutaneous                      PRN  
Start: S