

OP PEMBROLIZUMAB / CARBOPLATIN / PEMETREXED

Types: ONCOLOGY TREATMENT

Synonyms: CARB, PARA, CARBOPLATIN, PARAPLATIN, PEMETREXED, ALIMTA, PEM, PEMBROLIZUMAB, LUNG, NON, NSCL, KEYTRUDA

Cycle 1	Repeat 1 time	Cycle length: 21 days
Day 1		Perform every 1 day x1
Appointment Requests		
INFUSION APPOINTMENT REQUEST		
Interval: -- Occurrences: --		
Labs		
<input checked="" type="checkbox"/> CBC WITH PLATELET AND DIFFERENTIAL		
Interval: -- Occurrences: --		
<input checked="" type="checkbox"/> COMPREHENSIVE METABOLIC PANEL		
Interval: -- Occurrences: --		
<input checked="" type="checkbox"/> MAGNESIUM LEVEL		
Interval: -- Occurrences: --		
<input checked="" type="checkbox"/> THYROID STIMULATING HORMONE		
Interval: -- Occurrences: --		
<input checked="" type="checkbox"/> T3, FREE		
Interval: -- Occurrences: --		
<input checked="" type="checkbox"/> T4, FREE		
Interval: -- Occurrences: --		
<input type="checkbox"/> LDH		
Interval: -- Occurrences: --		
<input type="checkbox"/> URIC ACID LEVEL		
Interval: -- Occurrences: --		
Outpatient Electrolyte Replacement Protocol		
TREATMENT CONDITIONS 39		
Interval: -- Occurrences: --		
Comments: Potassium (Normal range 3.5 to 5.0mEq/L)		
o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP		
o Protocol applies only to same day lab value.		
o Serum potassium less than 3.0mEq/L, give 40mEq KCL IV or PO and contact MD/NP		
o Serum potassium 3.0 to 3.2mEq/L, give 40mEq KCL IV or PO		
o Serum potassium 3.3 to 3.4mEq/L, give 20mEq KCL IV or PO		
o Serum potassium 3.5 mEq/L or greater, do not give potassium replacement		
o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"		
o Sign electrolyte replacement order as Per protocol: cosign required		
TREATMENT CONDITIONS 40		
Interval: -- Occurrences: --		
Comments: Magnesium (Normal range 1.6 to 2.6mEq/L)		

- o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- o Protocol applies only to same day lab value.
- o Serum Magnesium less than 1.0mEq/L, give 2 gram magnesium sulfate IV and contact MD/NP
- o Serum Magnesium 1.0 to 1.2mEq/L, give 2 gram magnesium sulfate IV
- o Serum Magnesium 1.3 to 1.5mEq/L, give 1 gram magnesium sulfate IV
- o Serum Magnesium 1.6 mEq/L or greater, do not give magnesium replacement
- o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
- o Sign electrolyte replacement order as Per protocol: cosign required

Nursing Orders

ONC NURSING COMMUNICATION 80

Interval: -- Occurrences: --
 Comments: Confirm that patient has started taking Folic Acid 350-1000mcg PO daily beginning 1-2 weeks prior to the first dose of pemetrexed and continuing until 3 weeks after the last dose of pemetrexed.

Nursing Orders

TREATMENT CONDITIONS 7

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

Line Flush

sodium chloride 0.9 % flush 20 mL
 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.

Nursing Orders

sodium chloride 0.9 % infusion 500 mL
 Dose: 500 mL Route: intravenous once @ 500 mL/hr for 1 dose
 Start: S

Pre-Medications

ondansetron (ZOFTRAN) 16 mg, dexamethasone (DECADRON) 12 mg in sodium chloride 0.9% 50 mL IVPB
 Dose: -- Route: intravenous once over 15 Minutes for 1 dose
 Start: S End: S 11:30 AM

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Yes	No
	DEXAMETHASONE 4 MG/ML INJECTION SOLUTION	Medications	12 mg	Yes	No
	SODIUM	Base	50 mL	Always	Yes

CHLORIDE 0.9 %
 INTRAVENOUS
 SOLUTION
 DEXTROSE 5 % IN Base No Yes
 WATER (D5W)
 INTRAVENOUS
 SOLUTION

ondansetron (ZOFTRAN) tablet 16 mg

Dose: 16 mg Route: oral once for 1 dose
 Start: S End: S 11:30 AM

dexamethasone (DECADRON) tablet 12 mg

Dose: 12 mg Route: oral once for 1 dose
 Start: S

palonosetron (ALOXI) injection 0.25 mg

Dose: 250 mcg Route: intravenous once for 1 dose
 Start: S End: S 3:00 PM
 Instructions:
 For OUTPATIENT use only.

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
 Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML	Medications	130 mg	Main Ingredient	Yes
	INTRAVENOUS EMULSION				
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
 Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML	Medications	130 mg	Main Ingredient	Yes
	INTRAVENOUS EMULSION				
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

LORazepam (ATIVAN) tablet 1 mg

Dose: 1 mg Route: oral once for 1 dose

Start: S

Chemotherapy

pembrolizumab (KEYTRUDA) 200 mg in sodium chloride 0.9 % 100 mL IVPB

Dose: 200 mg Route: intravenous once over 30 Minutes for 1 dose

Start: S End: S 2:58 AM

Instructions:

Administer with low protein binding 0.22 micron in-line filter. Do not shake. Do not mix with other medications.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMBROLIZUMAB 25 MG/ML INTRAVENOUS SOLUTION	Medications	200 mg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	92 mL	Yes	Yes

Chemotherapy

PEMExtrexed (ALIMTA) 500 mg/m2 in sodium chloride 0.9 % 100 mL chemo IVPB

Dose: 500 mg/m2 Route: intravenous once over 10 Minutes for 1 dose

Offset: 30 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMETREXED 500 MG INTRAVENOUS SOLUTION	Medications	500 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	Yes	Yes

CARBOplatin (PARAplatin) in sodium chloride 0.9 % 250 mL chemo IVPB

AUC: 5 Use AUC Route: intravenous once over 60 Minutes for 1 dose

Offset: 40 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CARBOPLATIN 10 MG/ML INTRAVENOUS SOLUTION	Medications		Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	250 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	250 mL	No	Yes

Hematology & Oncology Hypersensitivity Reaction Standing Order

ONC NURSING COMMUNICATION 82

Interval: --

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 4

Interval: --

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 83

Interval: --

Occurrences: --

Comments:

Grade 3 – SEVERE Symptoms (hypoxia, hypotension, or neurologic compromise – cyanosis or O₂ 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 O₂ 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

Supportive Care

cyanocobalamin injection 1,000 mcg

Dose: 1,000 mcg Route: intramuscular once for 1 dose

Start: S End: S 2:30 PM

Instructions:

Begin week 1 of Pemetrexed dose, then every 9 weeks thereafter.

Discharge Nursing Orders

ONC NURSING COMMUNICATION 76

Interval: -- Occurrences: --

Comments: Discontinue IV.

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.

Post-Medications

 pegfilgrastim (NEULASTA) on-body injection kit 6 mg

Dose: 6 mg Route: subcutaneous once for 1 dose

Start: S End: S

Instructions:

Apply to intact, nonirritated skin on the back of the arm or abdomen (only use the back of the arm if caregiver is available to monitor On-body injection status).

Cycles 2,3

Repeat 2 times

Cycle length: 21 days

Day 1

Perform every 1 day x1

Appointment Requests

INFUSION APPOINTMENT REQUEST

Interval: -- Occurrences: --

Labs

CBC WITH PLATELET AND DIFFERENTIAL

Interval: -- Occurrences: --

COMPREHENSIVE METABOLIC PANEL

Interval: -- Occurrences: --

MAGNESIUM LEVEL

Interval: -- Occurrences: --

THYROID STIMULATING HORMONE

Interval: -- Occurrences: --

T3, FREE

Interval: -- Occurrences: --

T4, FREE

Interval: -- Occurrences: --

LDH

Interval: -- Occurrences: --

URIC ACID LEVEL

Interval: -- Occurrences: --

Outpatient Electrolyte Replacement Protocol

TREATMENT CONDITIONS 39

Interval: -- Occurrences: --

Comments:

- Potassium (Normal range 3.5 to 5.0mEq/L)
- o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
 - o Protocol applies only to same day lab value.
 - o Serum potassium less than 3.0mEq/L, give 40mEq KCL IV or PO and contact MD/NP
 - o Serum potassium 3.0 to 3.2mEq/L, give 40mEq KCL IV or PO
 - o Serum potassium 3.3 to 3.4mEq/L, give 20mEq KCL IV or PO
 - o Serum potassium 3.5 mEq/L or greater, do not give potassium replacement
 - o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
 - o Sign electrolyte replacement order as Per protocol: cosign required

TREATMENT CONDITIONS 40

Interval: -- Occurrences: --

Comments:

- Magnesium (Normal range 1.6 to 2.6mEq/L)
- o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
 - o Protocol applies only to same day lab value.
 - o Serum Magnesium less than 1.0mEq/L, give 2 gram magnesium sulfate IV and contact MD/NP
 - o Serum Magnesium 1.0 to 1.2mEq/L, give 2 gram magnesium sulfate IV
 - o Serum Magnesium 1.3 to 1.5mEq/L, give 1 gram magnesium sulfate IV
 - o Serum Magnesium 1.6 mEq/L or greater, do not give magnesium replacement
 - o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
 - o Sign electrolyte replacement order as Per protocol: cosign required

Nursing Orders

ONC NURSING COMMUNICATION 80

Interval: -- Occurrences: --
 Comments: Confirm that patient has started taking Folic Acid 350-1000mcg PO daily beginning 1-2 weeks prior to the first dose of pemetrexed and continuing until 3 weeks after the last dose of pemetrexed.

Nursing Orders

TREATMENT CONDITIONS 7

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

Line Flush

sodium chloride 0.9 % flush 20 mL

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.

Nursing Orders

sodium chloride 0.9 % infusion 500 mL

Dose: 500 mL Route: intravenous once @ 500 mL/hr for 1 dose
 Start: S

Pre-Medications

ondansetron (ZOFRAN) 16 mg, dexamethasone (DECADRON) 12 mg in sodium chloride 0.9% 50 mL IVPB

Dose: -- Route: intravenous once over 15 Minutes for 1 dose
 Start: S End: S 11:30 AM

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Yes	No
	DEXAMETHASONE 4 MG/ML INJECTION SOLUTION	Medications	12 mg	Yes	No
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	50 mL	Always	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base		No	Yes

ondansetron (ZOFRAN) tablet 16 mg

Dose: 16 mg Route: oral once for 1 dose
 Start: S End: S 11:30 AM

dexamethasone (DECADRON) tablet 12 mg

Dose: 12 mg Route: oral once for 1 dose
 Start: S

palonosetron (ALOXI) injection 0.25 mg

Dose: 250 mcg Route: intravenous once for 1 dose
Start: S End: S 3:00 PM
Instructions:
For OUTPATIENT use only.

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML INTRAVENOUS EMULSION	Medications	130 mg	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML INTRAVENOUS EMULSION	Medications	130 mg	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

LORazepam (ATIVAN) tablet 1 mg

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

Chemotherapy

pembrolizumab (KEYTRUDA) 200 mg in sodium chloride 0.9 % 100 mL IVPB

Dose: 200 mg Route: intravenous once over 30 Minutes for 1 dose
Start: S End: S 2:58 AM

Instructions:
Administer with low protein binding 0.22 micron in-line filter. Do not shake. Do not mix with other medications.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMBROLIZUMAB 25 MG/ML INTRAVENOUS SOLUTION	Medications	200 mg	Main Ingredient	Yes

SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	92 mL	Yes	Yes
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Chemotherapy

PEMEtrexed (ALIMTA) 500 mg/m2 in sodium chloride 0.9 % 100 mL chemo IVPB

Dose: 500 mg/m2 Route: intravenous once over 10 Minutes for 1 dose
Offset: 30 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMETREXED 500 MG INTRAVENOUS SOLUTION	Medications	500 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	Yes	Yes

CARBOplatin (PARAplatin) in sodium chloride 0.9 % 250 mL chemo IVPB

AUC: 5 Use AUC Route: intravenous once over 60 Minutes for 1 dose
Offset: 40 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CARBOPLATIN 10 MG/ML INTRAVENOUS SOLUTION	Medications		Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	250 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	250 mL	No	Yes

Hematology & Oncology Hypersensitivity Reaction Standing Order

ONC NURSING COMMUNICATION 82

Interval: -- 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 4

Interval: -- 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 83

Interval: --

Comments:

Occurrences: --

Grade 3 – SEVERE Symptoms (hypoxia, hypotension, or neurologic compromise – cyanosis or O₂ 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 O₂ 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

ONC NURSING COMMUNICATION 76

Interval: -- Occurrences: --
Comments: Discontinue IV.

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.

Post-Medications

pegfilgrastim (NEULASTA) on-body injection kit 6 mg

Dose: 6 mg Route: subcutaneous once for 1 dose
Start: S End: S

Instructions:
Apply to intact, nonirritated skin on the back of the arm or abdomen (only use the back of the arm if caregiver is available to monitor On-body injection status).

Cycle 4

Repeat 1 time

Cycle length: 21 days

Day 1

Perform every 1 day x1

Appointment Requests

INFUSION APPOINTMENT REQUEST

Interval: -- Occurrences: --

Labs

CBC WITH PLATELET AND DIFFERENTIAL

Interval: -- Occurrences: --

COMPREHENSIVE METABOLIC PANEL

Interval: -- Occurrences: --

MAGNESIUM LEVEL

Interval: -- Occurrences: --

THYROID STIMULATING HORMONE

Interval: -- Occurrences: --

T3, FREE

Interval: -- Occurrences: --

T4, FREE

Interval: -- Occurrences: --

LDH

Interval: -- Occurrences: --

URIC ACID LEVEL

Interval: -- Occurrences: --

Outpatient Electrolyte Replacement Protocol

TREATMENT CONDITIONS 39

Interval: -- Occurrences: --
Comments: Potassium (Normal range 3.5 to 5.0mEq/L)

- o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- o Protocol applies only to same day lab value.
- o Serum potassium less than 3.0mEq/L, give 40mEq KCL IV or PO and contact MD/NP
- o Serum potassium 3.0 to 3.2mEq/L, give 40mEq KCL IV or PO
- o Serum potassium 3.3 to 3.4mEq/L, give 20mEq KCL IV or PO
- o Serum potassium 3.5 mEq/L or greater, do not give potassium replacement
- o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
- o Sign electrolyte replacement order as Per protocol: cosign required

TREATMENT CONDITIONS 40

Interval: -- Occurrences: --
Comments: Magnesium (Normal range 1.6 to 2.6mEq/L)

- o Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- o Protocol applies only to same day lab value.
- o Serum Magnesium less than 1.0mEq/L, give 2 gram magnesium sulfate IV and contact MD/NP
- o Serum Magnesium 1.0 to 1.2mEq/L, give 2 gram magnesium sulfate IV
- o Serum Magnesium 1.3 to 1.5mEq/L, give 1 gram magnesium sulfate IV
- o Serum Magnesium 1.6 mEq/L or greater, do not give magnesium replacement
- o If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
- o Sign electrolyte replacement order as Per protocol: cosign required

Nursing Orders

ONC NURSING COMMUNICATION 80

Interval: -- Occurrences: --
Comments: Confirm that patient has started taking Folic Acid 350-1000mcg PO daily beginning 1-2 weeks prior to the first dose of pemetrexed and continuing until 3 weeks after the last dose of pemetrexed.

Nursing Orders

TREATMENT CONDITIONS 7

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

Line Flush

sodium chloride 0.9 % flush 20 mL
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.

Nursing Orders

sodium chloride 0.9 % infusion 500 mL

Dose: 500 mL Route: intravenous once @ 500 mL/hr for 1 dose

Start: S

Pre-Medications

ondansetron (ZOFRAN) 16 mg, dexamethasone

(DECADRON) 12 mg in sodium chloride 0.9% 50 mL IVPB

Dose: -- Route: intravenous once over 15 Minutes for 1 dose
 Start: S End: S 11:30 AM

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Yes	No
	DEXAMETHASONE 4 MG/ML INJECTION SOLUTION	Medications	12 mg	Yes	No
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	50 mL	Always	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base		No	Yes

ondansetron (ZOFRAN) tablet 16 mg

Dose: 16 mg Route: oral once for 1 dose
 Start: S End: S 11:30 AM

dexamethasone (DECADRON) tablet 12 mg

Dose: 12 mg Route: oral once for 1 dose
 Start: S

palonosetron (ALOXI) injection 0.25 mg

Dose: 250 mcg Route: intravenous once for 1 dose
 Start: S End: S 3:00 PM
 Instructions:
 For OUTPATIENT use only.

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
 Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML INTRAVENOUS EMULSION	Medications	130 mg	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose
 Start: S End: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2	Medications	130 mg	Main	Yes

MG/ML				Ingredient
INTRA VENOUS EMULSION				
DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Pre-Medications

LORazepam (ATIVAN) tablet 1 mg

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

Chemotherapy

pembrolizumab (KEYTRUDA) 200 mg in sodium chloride 0.9 % 100 mL IVPB

Dose: 200 mg Route: intravenous once over 30 Minutes for 1 dose
 Start: S End: S 2:58 AM

Instructions:

Administer with low protein binding 0.22 micron in-line filter. Do not shake. Do not mix with other medications.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMBROLIZUMAB 25 MG/ML INTRA VENOUS SOLUTION	Medications	200 mg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRA VENOUS SOLUTION	QS Base	92 mL	Yes	Yes

Chemotherapy

PEMEtrexed (ALIMTA) 500 mg/m2 in sodium chloride 0.9 % 100 mL chemo IVPB

Dose: 500 mg/m2 Route: intravenous once over 10 Minutes for 1 dose
 Offset: 30 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	PEMETREXED 500 MG INTRA VENOUS SOLUTION	Medications	500 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRA VENOUS SOLUTION	QS Base	100 mL	Yes	Yes

CARBOplatin (PARAplatin) in sodium chloride 0.9 % 250 mL chemo IVPB

AUC: 5 Use AUC Route: intravenous once over 60 Minutes for 1 dose
 Offset: 40 Minutes

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CARBOPLATIN 10 MG/ML INTRA VENOUS SOLUTION	Medications		Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRA VENOUS SOLUTION	QS Base	250 mL	Yes	Yes

DEXTROSE 5 % IN QS Base 250 mL No Yes
WATER (D5W)
INTRAVENOUS
SOLUTION

Hematology & Oncology Hypersensitivity Reaction Standing Order

ONC NURSING COMMUNICATION 82

Interval: --

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 4

Interval: --

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 83

Interval: --

Occurrences: --

Comments:

Grade 3 – SEVERE Symptoms (hypoxia, hypotension, or neurologic compromise – cyanosis or O2 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 O2 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

Supportive Care

cyanocobalamin injection 1,000 mcg

Dose: 1,000 mcg Route: intramuscular once for 1 dose
Start: S End: S 2:30 PM

Instructions:

Begin week 1 of Pemetrexed dose, then every 9 weeks thereafter.

Discharge Nursing Orders

ONC NURSING COMMUNICATION 76

Interval: -- Occurrences: --
Comments: Discontinue IV.

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.

Post-Medications

○ **pegfilgrastim (NEULASTA) on-body injection
kit 6 mg**

Dose: 6 mg

Route: subcutaneous once for 1 dose

Start: S

End: S

Instructions:

Apply to intact, nonirritated skin on the back of
the arm or abdomen (only use the back of the
arm if caregiver is available to monitor
On-body injection status).