

OP RAMUCIRUMAB (EVERY 14 DAYS)

Types: ONCOLOGY TREATMENT

Synonyms: CARCINO, ADENOCAR, JUNCTION, SIGH, CYRAMZA, ESOPH, GASTRO, RAMU, RAMI, PSY

Cycles 1 to 5	Repeat 5 times	Cycle length: 14 days
Day 1		Perform every 1 day x1
Appointment Requests		
INFUSION APPOINTMENT REQUEST		
Interval: -- Occurrences: --		
Labs		
<input checked="" type="checkbox"/> URINALYSIS, AUTOMATED WITH MICROSCOPY		
Interval: -- Occurrences: --		
<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: --		
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

TREATMENT CONDITIONS

Interval: -- Occurrences: --
Comments: Do NOT administer within 28 days of surgery/procedure and until the surgical wound is fully healed or within 14 days of port placement.

Nursing Orders

TREATMENT CONDITIONS 5

Interval: -- Occurrences: --
Comments: HOLD and notify provider if PROTEIN 2+ is detected in UA.

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.

Pre-Medications

diphenhydrAMINE (BENADRYL) injection 25 mg

Dose: 25 mg Route: intravenous once for 1 dose
Start: S
Instructions: Administer via slow IV push 30 minutes prior to chemotherapy.

diphenhydrAMINE (BENADRYL) 50 mg in sodium chloride 0.9 % 50 mL IVPB

Dose: 50 mg Route: intravenous once over 15 Minutes for 1 dose
Start: S End: S 11:45 AM
Instructions: Administer 30 minutes prior to chemotherapy.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	DIPHENHYDRAMIN E 50 MG/ML INJECTION SOLUTION	Medications	50 mg	Main Ingredient	No
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	50 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	50 mL	No	Yes

diphenhydrAMINE (BENADRYL) tablet 25 mg

Dose: 25 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

diphenhydrAMINE (BENADRYL) tablet 50 mg

Dose: 50 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

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

Dose: 20 mg Route: intravenous once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

famotidine (PEPCID) tablet 20 mg

Dose: 20 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

acetaminophen (TYLENOL) tablet 650 mg

Dose: 650 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

Chemotherapy

ramucirumab (CYRAMZA) 8 mg/kg in sodium chloride 0.9 % 250 mL chemo IVPB

Dose: 8 mg/kg Route: intravenous once over 60 Minutes for 1 dose
Offset: 30 Minutes

Instructions:
Use of a 0.22 micron protein sparing filter is recommended.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	RAMUCIRUMAB 10 MG/ML INTRAVENOUS SOLUTION	Medications	8 mg/kg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base		Yes	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

Antiemetics

promethazine (PHENERGAN) injection 12.5 mg

Dose: 12.5 mg Route: injection once 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 6

Repeat 1 time

Cycle length: 14 days

Day 1

Perform every 1 day x1

Appointment Requests

INFUSION APPOINTMENT REQUEST

Interval: -- Occurrences: --

Labs

URINALYSIS, AUTOMATED WITH MICROSCOPY

Interval: -- Occurrences: --

CBC WITH PLATELET AND DIFFERENTIAL

Interval: -- Occurrences: --

COMPREHENSIVE METABOLIC PANEL

Interval: -- Occurrences: --

MAGNESIUM 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

TREATMENT CONDITIONS

Interval: -- Occurrences: --

Comments:

- Do NOT administer within 28 days of surgery/procedure and until the surgical wound is fully healed or within 14 days of port placement.

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Interval: -- Occurrences: --

Comments:

- HOLD and notify provider if PROTEIN 2+ is detected in UA.

Nursing Orders

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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
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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

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Dose: 25 mg Route: intravenous once for 1 dose
Start: S
Instructions:
Administer via slow IV push 30 minutes prior to chemotherapy.

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diphenhydrAMINE (BENADRYL) tablet 25 mg

Dose: 25 mg Route: oral once for 1 dose
Offset: 0 Hours
Instructions:
Administer 30 minutes prior to chemotherapy.

diphenhydrAMINE (BENADRYL) tablet 50 mg

Dose: 50 mg Route: oral once for 1 dose
Offset: 0 Hours
Instructions:
Administer 30 minutes prior to chemotherapy.

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

Dose: 20 mg Route: intravenous once for 1 dose
Offset: 0 Hours
Instructions:
Administer 30 minutes prior to chemotherapy.

famotidine (PEPCID) tablet 20 mg

Dose: 20 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

acetaminophen (TYLENOL) tablet 650 mg

Dose: 650 mg Route: oral once for 1 dose
Offset: 0 Hours

Instructions:
Administer 30 minutes prior to chemotherapy.

Chemotherapy

ramucirumab (CYRAMZA) 8 mg/kg in sodium chloride 0.9 % 250 mL chemo IVPB

Dose: 8 mg/kg Route: intravenous once over 60 Minutes for 1 dose
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Instructions:
Use of a 0.22 micron protein sparing filter is recommended.

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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.
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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 Oxvaen 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).
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ONC NURSING COMMUNICATION 83

- Interval: -- Occurrences: --
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1. Stop the infusion.
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 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%.
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Dose: 100 mg Route: intravenous PRN

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Dose: 4 mg Route: intravenous PRN
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epINEPHrine (ADRENALIN) 1 mg/10 mL ADULT injection syringe 0.3 mg

Dose: 0.3 mg Route: subcutaneous PRN
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Antiemetics

- **promethazine (PHENERGAN) injection 12.5 mg**

Dose: 12.5 mg Route: injection once PRN
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Discharge Nursing Orders

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Dose: 20 mL Route: intravenous PRN

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Dose: 500 Units Route: intra-catheter once PRN

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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).