Protocol Index

IP R-ESHAP

Types: ONCOLOGY TREATMENT
Synonyms: ESHAP, LYMPH, CYTOSAR, ARAC, ARA, PLATIN, AQ, VEPESI, VP16

Cycle 1 Repeat 1 time Cycle length: 21 days

Day 1 Perform every 1 day x1

Provider Communication

ONC PROVIDER COMMUNICATION 5
Interval: Once Occurrences: --
Comments: Use baseline weight to calculate dose. Adjust dose for weight gains/losses of greater than or equal to 10%.

Labs

☑ **CBC WITH PLATELET AND DIFFERENTIAL**
Interval: Once Occurrences: --

☑ **COMPREHENSIVE METABOLIC PANEL**
Interval: Once Occurrences: --

☑ **MAGNESIUM LEVEL**
Interval: Once Occurrences: --

☐ **LDH**
Interval: Once Occurrences: --

☐ **URIC ACID LEVEL**
Interval: Once Occurrences: --

Provider Communication

ONC PROVIDER COMMUNICATION 58
Interval: Once Occurrences: --
Comments: Prior to beginning Rituxan infusion, please check if a Hepatitis B and C serology has been performed within the past 6 months. Hepatitis B and C serologies results: Push F2:11554001 drawn on ***.

Nursing Orders

TREATMENT CONDITIONS 7
Interval: Once 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.

Rituximab Pre-Medications

acetaminophen (TYLENOL) tablet 650 mg
Dose: 650 mg Route: oral once for 1 dose
Start: S

Instructions:
Give 30 minutes before rituximab infusion.

diphenhydrAMINE (BENADRYL) injection 25 mg
Dose: 25 mg | Route: intravenous | once for 1 dose
Start: S
Instructions:
Give 30 minutes before rituximab infusion.

sodium chloride 0.9 % infusion 500 mL
Dose: 500 mL | Route: intravenous | continuous
Start: S

Pharmacy Consult

PHARMACY CONSULT TO SCREEN FOR RAPID RITUXIMAB INFUSION
Interval: -- | Occurrences: --

Rituximab Instructions

VITAL SIGNS - T/P/R/BP PER UNIT PROTOCOL
Interval: Once | Occurrences: --
Comments:
1) During Rituximab infusion:
-Vitals every 15 minutes during 1st hour of infusion, THEN
-Every 30 minutes for 1 hour, THEN
-Every hour until end of infusion
-Call MD if SBP less than 90, pulse less than 60 or greater than 120, temperature greater than 38.5 degrees C

ONC NURSING COMMUNICATION 26
Interval: Once | Occurrences: --
Comments:
2) Infuse antibody via pump
3) If any of the following occurs: FEVER (T greater than 38.5 degrees C), RIGORS, HYPOTENSION (30mm Hg decrease from baseline), and / or MUCOSAL CONGESTION / EDEMA, HOLD infusion until improvement of symptoms (When symptoms improve, resume infusion at HALF the previous rate)

Chemotherapy

RiTUXimab (PF) (RITUXAN) 375 mg/m2 in sodium chloride 0.9% INITIAL INFUSION RATE IVPB
Dose: 375 mg/m2 | Route: intravenous | once for 1 dose
Offset: 30 Minutes

Instructions:
Initiate infusion at rate of 50 mg/hour. In the absence of infusion toxicity (SBP within 20 mmHG of baseline, PULSE between 60 and 120 and TEMP less than 38 degrees C, and no symptoms), then increase infusion rate by 50 mg/hour every 30 minutes, to a maximum rate of 400 mg/hour.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
RITUXIMAB 10 MG/ML CONCENTRATE,INTRAVENOUS	Medications	375 mg/m2	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base		Yes	Yes
DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS	Base		No	Yes

SOLUTION

○ **RiTUXimab (PF) (RITUXAN) in sodium chloride 0.9% NON-INITIAL INFUSION IVPB**

Dose: -- Route: intravenous once for 1 dose
Offset: 30 Minutes

Instructions:
Initiate infusion rate at a 100 mg/hour. In the absence of infusion toxicity (SBP within 20 mmHG of baseline, PULSE between 60 and 120 and TEMP less than 38 degrees C, and no symptoms), increase rate by 100 mg/hour increments at 30 minute intervals, to a maximum rate of 400 mg/hour.

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

○ **RiTUXimab (PF) (RITUXAN) 375 mg/m2 in sodium chloride 0.9% 250 mL RAPID INFUSION RATE IVPB**

Dose: 375 mg/m2 Route: intravenous once over 90 Minutes for 1 dose
Offset: 30 Minutes

Instructions:
RAPID INFUSION RATE: Initiate infusion at a rate of 100mL/hour. After 30 minutes, in the absence of infusion reactions (SBP within 20 mmHg of baseline, PULSE between 60 and 120 and Temp less than 38 degrees C, and no symptoms), increase the infusion rate to 200mL/hour. This infusion should take 90 minutes to administer.

Reaction grades:

Grade 3 Reaction: Prolonged (e.g., not rapidly responsive to symptomatic medication and/or brief interruption of infusion); recurrence of symptoms following initial improvement; hospitalization indicated for clinical sequelae (e.g., renal impairment, pulmonary infiltrates).

Grade 4 Reaction: Life-threatening consequences; urgent intervention indicated (e.g., vasopressors or ventilator support).

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	RITUXIMAB 10 MG/ML CONCENTRATE,INTRAVENOUS	Medications	375 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 %	QS Base	250 mL	Yes	Yes

INTRAVENOUS SOLUTION

Rituximab Infusion Reaction Orders

meperidine (DEMEROL) injection 25 mg
Dose: 25 mg | Route: intravenous | once PRN
Start: S

diphenhydrAMINE (BENADRYL) injection 25 mg
Dose: 25 mg | Route: intravenous | once PRN
Start: S

hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg
Dose: 100 mg | Route: intravenous | once PRN

famotidine (PEPCID) injection 20 mg
Dose: 20 mg | Route: intravenous | once PRN
Start: S

Rituximab Additional Orders

epINEPHrine (ADRENALIN) 1 mg/1 mL injection 0.3 mg
Dose: 0.3 mg | Route: intramuscular | once PRN
Start: S

Hydration

sodium chloride 0.9 % infusion
Dose: 150 mL/hr | Route: intravenous | continuous
Start: S
Instructions:
Infuse at 150 mL/hr.

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

Supportive Care

methylPREDNISolone sodium succinate (Solu-MEDROL) injection 500 mg
Dose: 500 mg | Route: intravenous | once for 1 dose

Chemotherapy

etoposide (TOPOSAR) 40 mg/m2 in sodium

chloride (NON-PVC) 0.9 % 250 mL chemo IVPB

Dose: 40 mg/m2 Route: intravenous once over 1 Hours for 1 dose
Offset: 30 Minutes

Instructions:
Administer through a 0.22 micron filter and non-PVC tubing set.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ETOPOSIDE 20 MG/ML INTRAVENOUS SOLUTION	Medications	40 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	QS Base	250 mL	Yes	Yes

ClSplatin (PLATINOL) 25 mg/m2 in sodium chloride 0.9 % 1,000 mL chemo IVPB

Dose: 25 mg/m2 Route: intravenous once over 23 Hours for 1 dose
Offset: 1.5 Hours

Instructions:
If greater than 20 mL of cisplatin extravasates, drug is considered a vesicant. Monitor and document urine output prior to administration of cisplatin to determine need for PRN furosemide.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CISPLATIN 1 MG/ML INTRAVENOUS SOLUTION	Medications	25 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	1,000 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base		No	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 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

☑ **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 2,3 — Perform every 1 day x2

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

Supportive Care

methylPREDNISolone sodium succinate (Solu-MEDROL) injection 500 mg
Dose: 500 mg | Route: intravenous | once for 1 dose

Chemotherapy

etoposide (TOPOSAR) 40 mg/m2 in sodium chloride (NON-PVC) 0.9 % 250 mL chemo IVPB

Dose: 40 mg/m2 Route: intravenous once over 1 Hours for 1 dose
Offset: 30 Minutes

Instructions:
Administer through a 0.22 micron filter and non-PVC tubing set.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ETOPOSIDE 20 MG/ML INTRAVENOUS SOLUTION	Medications	40 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	QS Base	250 mL	Yes	Yes

ClSplatin (PLATINOL) 25 mg/m2 in sodium chloride 0.9 % 1,000 mL chemo IVPB

Dose: 25 mg/m2 Route: intravenous once over 23 Hours for 1 dose
Offset: 1.5 Hours

Instructions:
If greater than 20 mL of cisplatin extravasates, drug is considered a vesicant. Monitor and document urine output prior to administration of cisplatin to determine need for PRN furosemide.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CISPLATIN 1 MG/ML INTRAVENOUS SOLUTION	Medications	25 mg/m2	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	1,000 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base		No	Yes

Day 4 Perform every 1 day x1

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.

Supportive Care

prednisoLONE acetate (PRED FORTE) 1 % ophthalmic suspension 2 drop

Dose: 2 drop Route: Both Eyes every 4 hours while awake
Start: S

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

Supportive Care

methylPREDNISolone sodium succinate (Solu-MEDROL) injection 500 mg

Dose: 500 mg | Route: intravenous | once for 1 dose

Chemotherapy

etoposide (TOPOSAR) 40 mg/m2 in sodium chloride (NON-PVC) 0.9 % 250 mL chemo IVPB

Dose: 40 mg/m2 | Route: intravenous | once over 1 Hours for 1 dose
Offset: 30 Minutes

Instructions:
Administer through a 0.22 micron filter and non-PVC tubing set.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
ETOPOSIDE 20 MG/ML INTRAVENOUS SOLUTION	Medications	40 mg/m2	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	QS Base	250 mL	Yes	Yes

CISplatin (PLATINOL) 25 mg/m2 in sodium chloride 0.9 % 1,000 mL chemo IVPB

Dose: 25 mg/m2 | Route: intravenous | once over 23 Hours for 1 dose
Offset: 1.5 Hours

Instructions:
If greater than 20 mL of cisplatin extravasates, drug is considered a vesicant. Monitor and document urine output prior to administration of cisplatin to determine need for PRN furosemide.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
CISPLATIN 1 MG/ML INTRAVENOUS SOLUTION	Medications	25 mg/m2	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	1,000 mL	Yes	Yes
DEXTROSE 5 % IN	QS Base		No	Yes

WATER (D5W) INTRAVENOUS SOLUTION

Day 5 Perform every 1 day x1

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

Chemotherapy

methylPREDNISolone sodium succinate (Solu-MEDROL) injection 500 mg

Dose: 500 mg | Route: intravenous | once for 1 dose
Start: S

Chemotherapy

cytarabine PF (CYSTOSAR) 2,000 mg/m2 in dextrose 5% 250 mL chemo IVPB

Dose: 2,000 mg/m2 | Route: intravenous | once over 2 Hours for 1 dose
Offset: 60 Minutes

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
CYTARABINE (PF) 100 MG/5 ML (20 MG/ML) INJECTION SOLUTION	Medications	2,000 mg/m2	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base		No	Yes
DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	250 mL	Yes	Yes