Protocol Index

OP LIPOSOMAL DOXORUBICIN / BEVACIZUMAB

Types: ONCOLOGY TREATMENT
Synonyms: LIPOSOMAL, DOXORUBICIN, DOXIL, DOC, BREAST, OVARIAN, GYNECOLOGIC, AVAST, BEVA

Cycles 1 to 3 Repeat 3 times Cycle length: 28 days

Day 1 Perform every 1 day x1

Appointment Requests

INFUSION APPOINTMENT REQUEST
Interval: -- Occurrences: --

Labs

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

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

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

☑ **URINALYSIS, AUTOMATED WITH MICROSCOPY**
Interval: -- Occurrences: --

☐ **CANCER ANTIGEN 125**
Interval: -- Occurrences: --

Outpatient Electrolyte Replacement Protocol

TREATMENT CONDITIONS 39
Interval: -- Occurrences: --
Comments: Potassium (Normal range 3.5 to 5.0mEq/L)
- Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- Protocol applies only to same day lab value.
- Serum potassium less than 3.0mEq/L, give 40mEq KCL IV or PO and contact MD/NP
- Serum potassium 3.0 to 3.2mEq/L, give 40mEq KCL IV or PO
- Serum potassium 3.3 to 3.4mEq/L, give 20mEq KCL IV or PO
- Serum potassium 3.5 mEq/L or greater, do not give potassium replacement
- If patient meets criteria, order SmartSet called "Outpatient Electrolyte Replacement"
- Sign electrolyte replacement order as Per protocol: cosign required

TREATMENT CONDITIONS 40
Interval: -- Occurrences: --
Comments: Magnesium (Normal range 1.6 to 2.6mEq/L)
- Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- Protocol applies only to same day lab value.
- Serum Magnesium less than 1.0mEq/L, give 2 gram magnesium sulfate IV and contact MD/NP
- Serum Magnesium 1.0 to 1.2mEq/L, give 2 gram magnesium sulfate IV
- Serum Magnesium 1.3 to 1.5mEq/L, give 1 gram magnesium sulfate IV
- 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.

Provider Communication

ONC PROVIDER COMMUNICATION
Interval: -- Occurrences: --
Comments: Verify Ejection Fraction prior to Cycle 1. Ejection Fraction: ***% on *** (date).

If patient has not had a recent MUGA or ECHO, order one via order entry. A baseline cardiac evaluation with a MUGA scan or an ECHO is recommended, especially in patients with risk factors for increased cardiac toxicity. Repeated MUGA or ECHO determinations of LVEF should be performed, particularly with higher, cumulative anthracycline doses.

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

dextrose 5% flush syringe 20 mL
Dose: 20 mL Route: intravenous PRN
Start: S
Instructions:
Administer ONLY for Liposomal Doxorubicin.

sodium chloride 0.9 % flush 20 mL
Dose: 20 mL Route: intravenous PRN
Start: S
Instructions:
Do NOT administer with Liposomal Doxorubicin.

Nursing Orders

dextrose 5% infusion 250 mL
Dose: 250 mL Route: intravenous once @ 30 mL/hr for 1 dose
Start: S
Instructions:
To keep vein open for Liposomal Doxorubicin.

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. Do NOT administer with

Liposomal Doxorubicin.

Pre-Medications

○ **ondansetron (ZOFRAN) 4 mg/2 mL injection 8 mg**

Dose: 8 mg | Route: intravenous | once for 1 dose
Start: S | End: S 11:15 AM

○ **ondansetron (ZOFRAN) tablet 16 mg**

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

◉ **ondansetron (ZOFRAN) 4 mg/2 mL 16 mg in dextrose 5% 50 mL IVPB**

Dose: 16 mg | Route: intravenous | once over 15 Minutes for 1 dose
Start: S | End: S 11:00 AM

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

☑ **acetaminophen (TYLENOL) tablet 650 mg**

Dose: 650 mg | Route: oral | once for 1 dose
Start: S
Instructions:
Pre-med for Avastin

☑ **diphenhydrAMINE (BENADRYL) tablet 25 mg**

Dose: 25 mg | Route: oral | once for 1 dose
Start: S
Instructions:
Pre-med for Avastin

☐ **dexamethasone (DECADRON) injection 10 mg**

Dose: 10 mg | Route: intravenous | once for 1 dose
Start: S
Instructions:
Pre-med for Avastin

Supportive Care

○ **LORAZepam (ATIVAN) injection 1 mg**

Dose: 1 mg | Route: intravenous | once PRN
Start: S

○ **LORAZepam (ATIVAN) tablet 1 mg**

Dose: 1 mg | Route: oral | once PRN
Start: S

Antiemetics

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

Dose: 12.5 mg | Route: injection | once PRN
Start: S

Chemotherapy

DOXOrubicin liposomal (DOXIL) 40 mg/m2 in

dextrose 5% 250 mL chemo IVPB

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

Instructions:
DRUG IS AN IRRITANT. Initial infusion infused at 1 mg/min, but no faster than 1 hour to prevent infusion related reactions. Monitor vital signs 15 minutes, 30 minutes, and one hour into infusion, then hourly for remainder of initial infusion. Stay with patient for the first 15 minutes of the initial infusion. If patient tolerated initial infusion, subsequent infusions to be given over 1 hour.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	DOXORUBICIN, PEGYLATED LIPOSOMAL 2 MG/ML INTRAVENOUS SUSPENSION	Medications	40 mg/m2	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	250 mL	Yes	Yes

Chemotherapy

bevacizumab (AVASTIN) 10 mg/kg in sodium chloride 0.9 % 100 mL chemo IVPB

Dose: 10 mg/kg Route: intravenous once over 30 Minutes for 1 dose
Start: S End: S 12:15 PM

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	BEVACIZUMAB 25 MG/ML INTRAVENOUS SOLUTION	Medications	10 mg/kg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	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

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.

Day 15 Perform every 1 day x1

Appointment Requests

INFUSION APPOINTMENT REQUEST
Interval: -- Occurrences: --

Labs

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

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

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

☑ **URINALYSIS, AUTOMATED WITH MICROSCOPY**
Interval: -- Occurrences: --

☐ **CANCER ANTIGEN 125**
Interval: -- Occurrences: --

Outpatient Electrolyte Replacement Protocol

TREATMENT CONDITIONS 39
Interval: -- Occurrences: --
Comments: Potassium (Normal range 3.5 to 5.0mEq/L)
- Protocol applies for SCr less than 1.5. Otherwise, contact MD/NP
- Protocol applies only to same day lab value.
- Serum potassium less than 3.0mEq/L, give 40mEq KCL IV or PO and contact MD/NP
- 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

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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
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

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

Instructions:
Pre-med for Avastin

☑ **diphenhydrAMINE (BENADRYL) tablet 25 mg**

Dose: 25 mg Route: oral once for 1 dose
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Instructions:
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☐ **dexamethasone (DECADRON) injection 10 mg**

Dose: 10 mg Route: intravenous once for 1 dose
Start: S
Instructions:
Pre-med for Avastin

Chemotherapy

bevacizumab (AVASTIN) 10 mg/kg in sodium chloride 0.9 % 100 mL chemo IVPB

Dose: 10 mg/kg Route: intravenous once over 30 Minutes for 1 dose
Start: S End: S 12:15 PM

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
BEVACIZUMAB 25 MG/ML INTRAVENOUS SOLUTION	Medications	10 mg/kg	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	100 mL	Yes	Yes

Hematology & Oncology Hypersensitivity Reaction Standing Order

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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.
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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.