Regimen Reference Order – LYMP – R-CHOP alternating with R-DHAP

ARIA: LYMP – [R-CHOP alt. R-DHAP (SLOW)]
LYMP - [R-CHOP alt. R-DHAP (SLOW for Cycle 1)]

Planned Course: Every 21 days for 6 cycles (R-CHOP given on cycles 1, 3 and 5; R-DHAP given on cycles 2, 4 and 6)

Indication for Use: Non-Hodgkin Lymphoma (Mantle Cell)

CVAD: At Provider's Discretion (VESICANT INVOLVED)

Proceed with treatment if:

Cycles 1, 3 and 5 (R-CHOP)

- ***ANC equal to or greater than 0.8 x 10^9/L AND Platelets equal to or greater than 100 x 10^9/L***

Cycles 2, 4 and 6 (R-DHAP)

- ***ANC equal to or greater than 1 x 10^9/L AND Platelets equal to or greater than 75 x 10^9/L***
- ***Creatinine clearance greater than 45 mL/minute***
  - ❖ **Contact Hematologist if parameters not met**

***Note:* Hepatitis B serology results must be reviewed in accordance with CCMB Policy Hepatitis B Monitoring for Oncology and Hematology Patients**

SEQUENCE OF MEDICATION ADMINISTRATION – R-CHOP (Cycles 1, 3 and 5)

Pre-treatment Requirements – R-CHOP (Cycles 1, 3 and 5)

Drug	Dose	CCMB Administration Guideline
Instruct patient to start vigorous oral pre-hydration (600-900 mL) the morning of cyclophosphamide treatment **(Self-administered at home)**		
allopurinol	300 mg	Orally once daily for 10 days to begin 3 days prior to Cycle 1 **(Self-administered at home)** Only patients at risk of tumor lysis syndrome will be prescribed allopurinol Note: allopurinol should not be prescribed beyond 10 days unless under the direction of the hematologist. See *Additional Information*

Treatment Regimen – LYMP – R-CHOP (Cycles 1, 3 and 5)

Establish primary solution 500 mL of: normal saline

Drug	Dose	CCMB Administration Guideline
Day 1		
predniSONE	100 mg	Orally once in the morning with food **(Self-administered at home)** **predniSONE is started on Day 1 regardless if R-CHOP is given over one day or split over two days**
cetirizine	10 mg	Orally 30 minutes prior to riTUXimab

acetaminophen	650 mg	Orally 30 minutes prior to riTUXimab
dexamethasone**	12 to 20 mg 20 mg for Cycle 1	IV in normal saline 50 mL over 15 minutes
Wait 30 minutes after completion of IV pre-medication(s) before starting riTUXimab		
riTUXimab (IV brand name specific)	375 mg/m^2	**<u>Slow infusion</u> (if greater than 6 months since last riTUXimab dose or no previous riTUXimab):** IV made up to a final concentration of 1 mg/mL in normal saline. Start at 50 mg/hr for 60 minutes and escalate infusion rate in 50 mg/hr increments every 30 minutes to a maximum of 400 mg/hr **Nursing Alert: IV tubing is primed with riTUXimab* **Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* **Alert: Pharmacy to ensure final volume on label* **OR** **<u>Slow infusion</u> (if equal to or less than 6 months since last riTUXimab dose):** IV made up to a final concentration of 1 mg/mL in normal saline. Start at 100 mg/hr for 30 minutes and escalate infusion rate in 100 mg/hr increments every 30 minutes to a maximum of 400 mg/hr **Nursing Alert: IV tubing is primed with riTUXimab* **Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* **Alert: Pharmacy to ensure final volume on label*
		OR
		<u>Rapid infusion</u>: IV in normal saline over 90 minutes: Infuse 50 mL of a 250 mL bag (or 100 mL of a 500 mL bag) over 30 minutes, then infuse the remaining 200 mL (or 400 mL of a 500 mL bag) over 60 minutes **Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* **Alert: rapid infusion and subcutaneous route not to be used for riTUXimab naïve patients* **Alert: Pharmacy to ensure final volume on label*
	OR	
riTUXimab (Subcutaneous)	1400 mg (1400 mg = 11.7 mL)	**<u>Subcutaneous</u>**: Administer over 5 minutes into abdomen Syringe should be held in hand for 5 minutes to warm up and decrease viscosity Use 25G needle **Alert: rapid infusion and subcutaneous route not to be used for riTUXimab naïve patients* **Nursing Alert: Ensure subcutaneous riTUXimab formulation is used (riTUXimab-hyaluronidase, human)*
ondansetron**	16 mg	Orally 30 minutes pre-chemotherapy
DOXOrubicin	50 mg/m^2	IV Push over 10 to 15 minutes

vinCRIStine	1.4 mg/m^2; maximum dose 2 mg	IV in normal saline 25 mL over 2 to 3 minutes by gravity infusion
cyclophosphamide	750 mg/m^2	IV in normal saline 250 mL over 1 hour
Days 2, 3, 4 and 5		
predniSONE	100 mg	Orally once daily in the morning with food **(Self-administered at home)**
****If R-CHOP is split over two days, give dexamethasone 12 mg and ondansetron prior to CHOP on Day 2**		
All doses will be automatically rounded that fall within CCMB Approved Dose Bands. See Dose Banding document for more information		

In the event of an infusion-related hypersensitivity reaction, refer to the '**Hypersensitivity Reaction Standing Order'**

REQUIRED MONITORING – R-CHOP

Hepatitis B serology
- Hepatitis B surface antigen and Hepatitis B core antibody (drawn within preceding 5 years)

All Cycles
- CBC, serum creatinine, urea, electrolytes, liver enzymes, LDH, total bilirubin, uric acid and albumin as per Physician Orders

Cardiac Monitoring
- Left Ventricular Ejection Fraction (LVEF) monitoring is recommended at baseline and as clinically indicated

INTRAVENOUS riTUXimab
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O_2 saturation) at baseline and as clinically indicated
- No observation period is required after riTUXimab administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

SUBCUTANEOUS riTUXimab
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O_2 saturation) at baseline, at discharge and as clinically indicated
- **15-minute observation period required after each dose**

Recommended Support Medications – R-CHOP

Drug	Dose	CCMB Administration Guideline
metoclopramide	10 – 20 mg	Orally every 4 hours as needed for nausea and vomiting

DISCHARGE INSTRUCTIONS – R-CHOP

- Patients should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge
- Instruct patient to:
    - Continue taking anti-emetic(s) at home
    - Maintain oral intake of 2000 mL (8 glasses) of fluid daily at home
    - Empty bladder every 2 hours while awake and at bedtime for 24 hours after each dose of cyclophosphamide
    - Obtain immediate assistance as per your clinic's contact instructions if:
        - Symptoms of hemorrhagic cystitis (e.g. dysuria, hematuria)
        - Unable to drink recommended amount of fluid
- predniSONE is a cancer therapy in this treatment regimen. Remind patient to take predniSONE at home
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

ADDITIONAL INFORMATION – R-CHOP

- Cumulative DOXOrubicin dose should be calculated and should not exceed 450 mg/m^2
- Due to the risk of reactivation of Hepatitis B virus (HBV) while on this treatment regimen, prescriber must adhere to CCMB Policy ***Hepatitis B Monitoring for Oncology and Hematology Patients*** for ordering and interpreting HBV serology and prescribing antiviral prophylaxis
- Administering nurse must document any infusion-related reactions with any dose of riTUXimab
- Ensure there were **no Grade 3 or 4** infusion-related reactions with any previous dose prior to administering riTUXimab via subcutaneous injection or rapid infusion
- Intravenous riTUXimab formulation is available from more than one manufacturer and uses several different brand names. Brand name will be indicated in brackets after riTUXimab. **Ensure prescription label matches the brand name on prescribed order for intravenous riTUXimab**

SEQUENCE OF MEDICATION ADMINISTRATION – R-DHAP (Cycles 2, 4 and 6)

Pre-treatment Requirements – R-DHAP (Cycles 2, 4 and 6)

Drug	Dose	CCMB Administration Guideline
prednisoLONE 1% eye drops	2 drops	Instill 2 drops into each eye every 4 hours while awake beginning the morning that cytarabine starts and continue until 48 hours after the last dose of cytarabine

Treatment Regimen – LYMP – R-DHAP (Cycles 2, 4 and 6)

Establish primary solution 500 mL of: normal saline

Cycles 2, 4 and 6 (SUBCUTANEOUS injection or RAPID IV riTUXimab)

Day 1

Drug	Dose	CCMB Administration Guideline
cetirizine	10 mg	Orally 30 minutes prior to riTUXimab
acetaminophen	650 mg	Orally 30 minutes prior to riTUXimab
dexamethasone	40 mg	IV in normal saline 50 mL over 15 minutes
Wait 30 minutes after completion of IV pre-medication(s) before starting riTUXimab		
riTUXimab (Subcutaneous)	1400 mg (1400 mg = 11.7 mL)	**Subcutaneous:** Administered over 5 minutes into abdomen Syringe should be held in hand for 5 minutes to warm up and decrease viscosity Use 25G needle **Nursing Alert: Ensure subcutaneous riTUXimab formulation is used (riTUXimab-hyaluronidase, human)*
	OR	
riTUXimab (IV brand name specific)	375 mg/m^2	**Rapid infusion**: IV in normal saline over 90 minutes: Infuse 50 mL of a 250 mL bag (or 100 mL of a 500 mL bag) over 30 minutes, then infuse the remaining 200 mL (or 400 mL of a 500 mL bag) over 60 minutes **Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* **Alert: Pharmacy to ensure final volume on label*
magnesium sulfate	2 g	IV in normal saline 1000 mL over 2 hours (Pre hydration)
aprepitant	125 mg	Orally 1 hour pre-chemotherapy
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
CISplatin	100 mg/m^2	IV in normal saline 500 mL over 1 hour **Alert: CISplatin infusion must be complete prior to mannitol administration*
mannitol	12.5 g	IV in normal saline 1000 mL over 2 hours (Post hydration)

Days 2 and 3		
aprepitant	80 mg	Orally 1 hour pre-chemotherapy
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
dexamethasone	40 mg	Orally 30 minutes pre-chemotherapy
cytarabine	2000 mg/m^2	IV in normal saline 500 mL over 3 hours
Day 4		
dexamethasone	40 mg	Orally once in the morning with food **(Self-administered at home)**
OR		
Cycles 2, 4 and 6 (SLOW IV riTUXimab)		
Day 1		
cetirizine	10 mg	Orally 30 minutes prior to riTUXimab
acetaminophen	650 mg	Orally 30 minutes prior to riTUXimab
dexamethasone	40 mg	IV in normal saline 50 mL over 15 minutes
Wait 30 minutes after completion of IV pre-medication(s) before starting riTUXimab		
riTUXimab (IV brand name specific)	375 mg/m^2	**Slow infusion**: IV made up to a final concentration of 1 mg/mL in normal saline. Start at 100 mg/hr for 30 minutes and escalate infusion rate in 100 mg/hr increments every 30 minutes to a maximum of 400 mg/hr **Nursing Alert: IV tubing is primed with riTUXimab* **Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* **Alert: Pharmacy to ensure final volume on label*
Day 2		
magnesium sulfate	2 g	IV in normal saline 1000 mL over 2 hours (Pre hydration)
aprepitant	125 mg	Orally 1 hour pre-chemotherapy
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
dexamethasone	40 mg	Orally 30 minutes pre-chemotherapy
CISplatin	100 mg/m^2	IV in normal saline 500 mL over 1 hour **Alert: CISplatin infusion must be complete prior to mannitol administration*
mannitol	12.5 g	IV in normal saline 1000 mL over 2 hours (Post hydration)
Days 3 and 4		
aprepitant	80 mg	Orally 1 hour pre-chemotherapy
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
dexamethasone	40 mg	Orally 30 minutes pre-chemotherapy
cytarabine	2000 mg/m^2	IV in normal saline 500 mL over 3 hours

All doses will be automatically rounded that fall within CCMB Approved Dose Bands. See Dose Banding document for more information

In the event of an infusion-related hypersensitivity reaction, refer to the '**Hypersensitivity Reaction Standing Order'**

REQUIRED MONITORING – R-DHAP

All Cycles

- CBC, serum creatinine, urea, electrolytes, liver enzymes, LDH, total bilirubin, uric acid and albumin as per Physician Orders
- Baseline blood pressure prior to magnesium infusion and repeat 15 minutes after start of magnesium infusion

INTRAVENOUS riTUXimab

- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O_2 saturation) at baseline and as clinically indicated
- No observation period is required after riTUXimab administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

SUBCUTANEOUS riTUXimab

- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O_2 saturation) at baseline, at discharge and as clinically indicated
- **15-minute observation period required after each dose**

Recommended Support Medications – R-DHAP

Drug	Dose	CCMB Administration Guideline
filgrastim (brand name specific)	5 mcg/kg (rounded to nearest 300 mcg or 480 mcg)	Subcutaneous once daily for 7 days to start on Day 6
metoclopramide	10 – 20 mg	Orally every 4 hours as needed for nausea and vomiting

DISCHARGE INSTRUCTIONS – R-DHAP

- Patients should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge
- Ensure patient receives filgrastim supply if patient is self-administering at home
- Instruct patient to continue taking anti-emetic(s) at home
- dexamethasone is a cancer therapy in this treatment regimen
- cytarabine can cause conjunctivitis. Remind patient to instill prednisoLONE eye drops until 48 hours after the last dose of cytarabine. If patient continues to have signs and symptoms of conjunctivitis, then please contact prescribing hematologist for further instructions
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

ADDITIONAL INFORMATION – R-DHAP

- CISplatin is ototoxic and nephrotoxic
- CISplatin can cause hypomagnesemia
- cytarabine can cause mental confusion
- Unless patient was taking allopurinol for gout or other reasons unrelated to the patient's underlying lymphoma, allopurinol should not be prescribed with cycle 2 and onwards unless directed by hematologist
- Administering nurse must document any infusion-related reactions with any dose of riTUXimab
- Ensure there were **no Grade 3 or 4** infusion-related reactions with any previous dose prior to administering riTUXimab via subcutaneous injection or rapid infusion
- Intravenous riTUXimab formulation is available from more than one manufacturer and uses several different brand names. Brand name will be indicated in brackets after riTUXimab. **Ensure prescription label matches the brand name on prescribed order for intravenous riTUXimab**