

Regimen Reference Order – LYMP – R-CEOP

ARIA: LYMP – [R-CEOP]

Planned Course: Every 21 days for 6 cycles

Indication for Use: Non-Hodgkin Lymphoma

CVAD: At Provider's Discretion (VESICANT INVOLVED)

Proceed with treatment if:

ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $100 \times 10^9/L$

❖ **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

Pre-treatment Requirements

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 <u>Note:</u> allopurinol should not be prescribed beyond 10 days unless under the direction of the hematologist. See <i>Additional Information</i>

Treatment Regimen – LYMP – R-CEOP

Establish primary solution 500 mL of: normal saline		
Drug	Dose	CCMB Administration Guideline
Cycle 1		
Day 1		
predniSONE	100 mg	Orally once in the morning with food (Self-administered at home)
cetirizine	10 mg	Orally 30 minutes prior to riTUXimab
acetaminophen	650 mg	Orally 30 minutes prior to riTUXimab
dexamethasone	20 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	<p>Slow infusion (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</p> <p><i>*Nursing Alert: IV tubing is primed with riTUXimab</i></p> <p><i>*Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order</i></p> <p><i>*Alert: Pharmacy to ensure final volume on label</i></p> <p>OR</p> <p>Slow infusion (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</p> <p><i>*Nursing Alert: IV tubing is primed with riTUXimab</i></p> <p><i>*Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order</i></p> <p><i>*Alert: Pharmacy to ensure final volume on label</i></p>
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
etoposide	50 mg/m ²	IV in normal saline 250 mL over 1 hour <i>Use non-DEHP bags and non-DEHP administration sets</i>
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 and 3		
predniSONE	100 mg	Orally once daily in the morning with food (Self-administered at home)
etoposide	100 mg/m ² (round to nearest 50 mg)	Orally once daily in the morning on an empty stomach Swallow whole <i>*Alert: Doses greater than 200 mg should be split into twice daily dosing. See etoposide Dosing Table on page 5</i> (Self-administered at home)
Days 4 and 5		
predniSONE	100 mg	Orally once daily in the morning with food (Self-administered at home)
Cycles 2 to 6		
Day 1		
predniSONE	100 mg	Orally once in the morning with food (Self-administered at home)
cetirizine	10 mg	Orally 30 minutes prior to riTUXimab
acetaminophen	650 mg	Orally 30 minutes prior to riTUXimab
dexamethasone	12 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: Administer over 5 minutes into abdomen Syringe should be held in hand for 5 minutes to warm up and decrease viscosity Use 25G needle <i>*Nursing Alert: Ensure subcutaneous riTUXimab formulation is used (riTUXimab-hyaluronidase, human)</i>
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 <i>*Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order</i> <i>*Alert: Pharmacy to ensure final volume on label</i>
OR		
		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 <i>*Nursing Alert: IV tubing is primed with riTUXimab</i> <i>*Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order</i> <i>*Alert: Pharmacy to ensure final volume on label</i>
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
etoposide	50 mg/m ²	IV in normal saline 250 mL over 1 hour <i>Use non-DEHP bags and non-DEHP administration sets</i>
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 and 3		
predniSONE	100 mg	Orally once daily in the morning with food (Self-administered at home)
etoposide	100 mg/m ² (round to nearest 50 mg)	Orally once daily in the morning on an empty stomach Swallow whole <i>*Alert: Doses greater than 200 mg should be split into twice daily dosing. See etoposide Dosing Table on page 5</i> (Self-administered at home)
Days 4 and 5		
predniSONE	100 mg	Orally once daily in the morning with food (Self-administered at home)
etoposide (VEPESID®) available dosage strength: 50 mg capsule Classification: Cytotoxic, Hazardous		

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

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

INTRAVENOUS ritUXimab

- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O₂ saturation) prior to each dose and as clinically indicated
- No observation period is required. 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 O₂ saturation) prior to each dose, at discharge and as clinically indicated
- 15-minute observation period required after each dose**

Recommended Support Medications

Drug	Dose	CCMB Administration Guideline
filgrastim (brand name specific)	5 mcg/kg (rounded to nearest 300 mcg or 480 mcg)	<i>ONLY</i> to be given if patient eligible for Growth Factor Support (refer to CCMB Drug Formulary Web App for Primary Prophylaxis eligibility criteria) Subcutaneous once daily for 5 days to start on Day 5
metoclopramide	10 – 20 mg	Orally every 4 hours as needed for nausea and vomiting

DISCHARGE INSTRUCTIONS

- Patients should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge
- For eligible patients, ensure patient receives filgrastim supply if patient is self-administering at home
- 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
- Nurse will provide oral etoposide to the patient on Day 1. Remind patient to take etoposide at home
- Patients should notify clinic prior to starting any new medication. etoposide has potential for drug-drug interactions
- Avoid grapefruit and grapefruit juice, Seville oranges (i.e. orange marmalade) and starfruit
- 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

- 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**
- 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
- For patients who do not tolerate oral etoposide, it may be substituted with intravenous etoposide on Days 2 and 3 at the physician's discretion. Intravenous etoposide dose would be 50 mg/m² on Days 2 and 3 for this regimen
- Oral etoposide is dispensed by CCMB Pharmacy to nursing (treatment room) on Day 1. CCMB Pharmacy will ship oral etoposide to CCP Pharmacy for patients being treated at a CCP
- CCMB Pharmacist is authorized to auto-substitute oral etoposide doses greater than 200 mg to twice daily dosing according to the table below
- **Note: At Cycle 1**, an entry called "*Physician Reminder- Growth Factor 60 y.o.*" will appear in the electronic drug order. **This prompt is to remind the prescriber to order filgrastim for eligible patients**

etoposide Dosing Table

Oral etoposide dose	Automatic substitution
250 mg orally once daily	150 mg in the morning and 100 mg in the evening
300 mg orally once daily	150 mg in the morning and 150 mg in the evening
350 mg orally once daily	200 mg in the morning and 150 mg in the evening
400 mg orally once daily	200 mg in the morning and 200 mg in the evening