

Regimen Reference Order – LYMP – ICE

ARIA: LYMP – [ICE]

Planned Course: Every 21 days for a maximum of 6 cycles

Indication for Use: Relapsed/Refractory Lymphoma

CVAD: At Provider's Discretion

Proceed with treatment if:

ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $75 \times 10^9/L$

❖ **Contact Hematologist if parameters not met**

SEQUENCE OF MEDICATION ADMINISTRATION

Pre-treatment Requirements

Drug	Dose	CCMB Administration Guideline
allopurinol*	300 mg	Orally once daily for 10 days to begin 3 days prior to Cycle 1 and at provider's discretion for subsequent cycles *Only patients at risk of tumor lysis syndrome will be prescribed allopurinol

Treatment Regimen – LYMP – ICE

Establish primary solution 500 mL of: normal saline			
Drug	Hours of Administration	Dose	CCMB Administration Guideline
Day 1			
normal saline	minus 1 hour and 15 minutes	500 mL	IV over 1 hour (Pre hydration)
dexamethasone	minus 30 minutes	12 mg	Orally 30 minutes pre-chemotherapy
ondansetron	minus 30 minutes	16 mg	Orally 30 minutes pre-chemotherapy
mesna	minus 15 minutes	333 mg/m ²	IV in normal saline 50 mL over 15 minutes Immediately prior to ifosfamide
ifosfamide	Hour 0	1667 mg/m ²	IV in normal saline 250 mL over 1 hour
CARBOplatin	Hour 1	AUC 5 mg/mL.min; maximum dose 750 mg (see table below)	IV in D5W 250 mL over 30 minutes
etoposide	Hour 1 and 30 minutes	100 mg/m ²	IV in normal saline 500 mL over 1 hour <i>Use non-DEHP bags and non-DEHP administration sets</i>

normal saline	Hour 2 and 30 minutes	500 mL	IV over 90 minutes (Post hydration)
mesna	Hour 4	333 mg/m ²	IV in normal saline 50 mL over 15 minutes
mesna	Hour 6	666 mg/m ²	Orally with juice or soft drink (Self-administered at home) <i>*Nursing Alert: Inform patient time to take dose</i>
Days 2 and 3			
normal saline	minus 1 hour and 15 minutes	500 mL	IV over 1 hour (Pre hydration)
dexamethasone	minus 30 minutes	12 mg	Orally 30 minutes pre-chemotherapy
ondansetron	minus 30 minutes	16 mg	Orally 30 minutes pre-chemotherapy
mesna	minus 15 minutes	333 mg/m ²	IV in normal saline 50 mL over 15 minutes Immediately prior to ifosfamide
ifosfamide	Hour 0	1667 mg/m ²	IV in normal saline 250 mL over 1 hour
etoposide	Hour 1	100 mg/m ²	IV in normal saline 500 mL over 1 hour <i>Use non-DEHP bags and non-DEHP administration sets</i>
normal saline	Hour 2	500 mL	IV over 2 hours (Post hydration)
mesna	Hour 4	333 mg/m ²	IV in normal saline 50 mL over 15 minutes
mesna	Hour 6	666 mg/m ²	Orally with juice or soft drink (Self-administered at home) <i>*Nursing Alert: Inform patient time to take dose</i>

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

REQUIRED MONITORING

Prior to Day 1

- CBC, serum creatinine, urea, AST, ALT, total bilirubin, uric acid, sodium, potassium, calcium, albumin, magnesium and phosphate as per Physician Orders

On Day 12 (or next working day if Day 12 is on a weekend or holiday)

- CBC to assess whether further filgrastim doses are required. Contact hematologist if ANC is less than 0.5 x 10⁹/L

Recommended Support Medications

Drug	Dose	CCMB Administration Guideline
pegfilgrastim (brand name specific) (See <i>Filgrastim Clinical Guide</i>)	6 mg	Subcutaneous once on Day 5 <i>*Alert: pegfilgrastim to be given as a single dose once per chemotherapy cycle no sooner than 24 hours after chemotherapy</i>
dexamethasone	8 mg	Orally once daily on Days 4 and 5
metoclopramide	10 – 20 mg	Orally every 4 hours as needed for nausea and vomiting

DISCHARGE INSTRUCTIONS

- Ensure patient receives pegfilgrastim supply if patient is self-administering at home
- Instruct patient to:
 - Continue taking anti-emetic(s) at home
 - ifosfamide can rarely cause encephalopathy; report changes in mental status
 - 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
 - Obtain immediate assistance as per your clinic's contact instructions if:
 - Signs of hemorrhagic cystitis
 - Unable to drink recommended amount of fluid
 - Self-administer "Hour 6" of mesna by mixing the contents of the mesna syringe in juice or soft drink (not grapefruit)
 - If patient vomits hour "6" mesna within 2 hours of taking, then the patient should be advised to contact their cancer team. Patient may require intravenous hydration
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

ADDITIONAL INFORMATION

- CARBOplatin dose considerations:
 - CCMB Lymphoproliferative DSG uses **actual body weight** to calculate GFR
 - CCMB Lymphoproliferative DSG uses a maximum CARBOplatin dose of 750 mg for this regimen
 - If calculated CARBOplatin dose differs **more than 10%** from prescribed CARBOplatin dose, contact the prescriber

CARBOplatin Dosing Calculations per CCMB Lymphoproliferative DSG										
<i>Calculation of CARBOplatin dose: (max.750 mg)</i>										
Dose (mg) = target AUC (GFR + 25)										
$\text{GFR} = \frac{N \times (140 - \text{age in years}) \times \text{Actual Body Weight (kg)}}{\text{serum creatinine in umol/L}} = \text{___ mL/min}$										
N = 1.23 in males N = 1.04 in females										
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;"> AUC (mg/mL.min) </td> </tr> <tr> <td style="border-top: 1px solid black; padding: 5px; text-align: center;"> 5 </td> </tr> </table>	AUC (mg/mL.min)	5	x	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;"> GFR + 25 (mL/min) </td> </tr> <tr> <td style="border-top: 1px solid black; padding: 5px; text-align: center;"> ___ + 25 </td> </tr> </table>	GFR + 25 (mL/min)	___ + 25	=	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;"> Total Dose (mg) </td> </tr> <tr> <td style="border-top: 1px solid black; padding: 5px; text-align: center;"> _____ </td> </tr> </table>	Total Dose (mg)	_____
AUC (mg/mL.min)										
5										
GFR + 25 (mL/min)										
___ + 25										
Total Dose (mg)										

AUC= Area Under Curve

The estimated creatinine clearance is based on limited evidence. Sound clinical judgment and interpretation of the estimation are required, because the equation above may not be appropriate for some patient populations (for example, acute renal failure).