

Regimen Reference Order

MYEL – carfilzomib + lenalidomide + dexamethasone

ARIA: MYEL – [carfilzomib + lenalidomide + dex]

Planned Course: carfilzomib, lenalidomide and dexamethasone for 18 cycles, followed by lenalidomide and dexamethasone until disease progression or unacceptable toxicity (1 cycle = 28 days)

Indication for Use: Multiple Myeloma

CVAD: At Provider’s Discretion

Proceed with treatment if:

Cycles 1 and 2

Day 1

- ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $30 \times 10^9/L$
- Proceed with carfilzomib only when lenalidomide starts

Day 15

- ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $30 \times 10^9/L$

Cycles 3 to 18

Day 1

- ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $30 \times 10^9/L$
- Proceed with carfilzomib only when lenalidomide starts

Cycles 19 and onwards

Day 1 only

- ANC equal to or greater than $1 \times 10^9/L$ AND Platelets equal to or greater than $30 \times 10^9/L$
- ❖ 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 of 6 to 8 cups of liquid per day starting at least 48 hours before Cycle 1 only		
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 (Self-administered at home)
ciprofloxacin	500 mg	Orally once daily starting the day prior to Cycle 1 only (Self-administered at home)

Treatment Regimen – MYEL – carfilzomib + lenalidomide + dexamethasone

Establish primary solution 500 mL of: normal saline

Drug	Dose	CCMB Administration Guideline
Cycle 1		
dexamethasone	40 mg	Orally once daily with food on Days 1, 8, 15 and 22 (Self-administered at home) <i>*Alert:</i> On days of carfilzomib administration, dexamethasone should be taken between <u>30 minutes to 4 hours</u> prior to carfilzomib
normal saline	500 mL	IV over 1 hour prior to carfilzomib (Pre hydration)
carfilzomib	20 mg/m ²	IV in D5W 100 mL over 30 minutes on Day 1
	70 mg/m ²	IV in D5W 100 mL over 30 minutes on Days 8 and 15
normal saline	500 mL	Infused over the 1-hour observation period (Post hydration)
lenalidomide	25 mg	Orally once daily on Days 1 to 21 , followed by 7 days off Take with or without food. Swallow whole (Self-administered at home)
Cycles 2 to 12		
dexamethasone	40 mg	Orally once daily with food on Days 1, 8, 15 and 22 (Self-administered at home) <i>*Alert:</i> On days of carfilzomib administration, dexamethasone should be taken between <u>30 minutes to 4 hours</u> prior to carfilzomib
carfilzomib	70 mg/m ²	IV in D5W 100 mL over 30 minutes on Days 1, 8 and 15
lenalidomide	25 mg	Orally once daily on Days 1 to 21 , followed by 7 days off Take with or without food. Swallow whole (Self-administered at home)
Cycles 13 to 18		
dexamethasone	40 mg	Orally once daily with food on Days 1, 8, 15 and 22 (Self-administered at home) <i>*Alert:</i> On days of carfilzomib administration, dexamethasone should be taken between <u>30 minutes to 4 hours</u> prior to carfilzomib
carfilzomib	70 mg/m ²	IV in D5W 100 mL over 30 minutes on Days 1 and 15
lenalidomide	25 mg	Orally once daily on Days 1 to 21 , followed by 7 days off Take with or without food. Swallow whole (Self-administered at home)
Cycle 19 onwards		
dexamethasone	40 mg	Orally once daily with food on Days 1, 8, 15 and 22 (Self-administered at home)

lenalidomide	25 mg	Orally once daily on Days 1 to 21 , followed by 7 days off Take with or without food. Swallow whole (Self-administered at home)
lenalidomide available dosage strengths: 5 mg, 10 mg, 15 mg, 20 mg and 25 mg capsules		
Classification: Cytotoxic, Hazardous		
carfilzomib doses will be automatically rounded to 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)

Cycles 1 and 2

Day 1

- CBC, serum creatinine, urea, electrolytes, liver enzymes, total bilirubin, albumin and glucose as per Physician Orders
- Serum Protein Electrophoresis (SPEP)/Free Light Chain Ratio (FLCH) (response assessment)
- Physician should assess patient for signs and symptoms of cardiotoxicity prior to each cycle

Day 15

- CBC, serum creatinine, urea, electrolytes, liver enzymes, total bilirubin, albumin and glucose as per Physician Orders

Cycles 3 to 18

Day 1

- CBC, reticulocyte count, serum creatinine, urea, electrolytes, liver enzymes, total bilirubin, albumin and glucose as per Physician Orders
- SPEP/FLCH

Cycle 19 and Onwards

- CBC, reticulocyte count, serum creatinine, urea, electrolytes, liver enzymes, total bilirubin, albumin and glucose as per Physician Orders
- SPEP/FLCH

carfilzomib monitoring

- Patient should be assessed for signs and symptoms of fluid overload prior to each carfilzomib dose
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O₂ saturation) at baseline and as clinically indicated
- Observe patient for 1 hour after carfilzomib infusion for Cycle 1 only (during Post hydration). Full vital signs prior to discharge

Per RevAid Program or Reddy2Assist Program– See Additional Information

- Patients of childbearing potential require β HCG according to RevAid Program/Reddy2Assist Program requirements

Recommended Support Medications

Drug	Dose	CCMB Administration Guideline
acetylsalicylic acid (ASA) enteric coated	81 mg delayed release	Orally once daily
valACYclovir	500 mg	Orally once daily

DISCHARGE INSTRUCTIONS

- Reinforce oral hydration of 6 to 8 cups of liquid per day
- Patients should be instructed to inform their cancer team of shortness of breath or signs and symptoms of fluid overload
- Remind patient to take lenalidomide and dexamethasone at home
- Remind patient to take valACYclovir (shingles prophylaxis) and ASA (antiplatelet) at home
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

ADDITIONAL INFORMATION

- carfilzomib has been associated with cardiotoxicity
- 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
- valACYclovir (shingles prophylaxis) continues during and for 4 weeks after completion of carfilzomib due to immunosuppression
- Patients should take therapy to prevent blood clots while on lenalidomide. The majority of patients will be prescribed acetylsalicylic acid (ASA) enteric coated 81 mg once daily. Patients at high risk may be prescribed other anticoagulants instead of acetylsalicylic acid
- All patients should be considered for bisphosphonate therapy
- lenalidomide is teratogenic
- Patients of childbearing potential will require monthly pregnancy tests (β HCG) that must be done within 7 days of the next prescription fill
- Effective November 25th, 2021, all new patients starting on lenalidomide will be enrolled in Reddy2Assist Program. lenalidomide can only be given to patients who are registered and meet all conditions of Reddy2Assist Program
- Existing patients on lenalidomide (started prior to November 25th, 2021) are currently enrolled in RevAid Program and must meet all conditions of RevAid Program
- lenalidomide will be dispensed by CCMB Pharmacy