

## 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

### 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 <b>(Self-administered at home)</b>
ciprofloxacin	500 mg	Orally once daily starting the day prior to Cycle 1 <b>only</b> <b>(Self-administered at home)</b>

### Treatment Regimen – MYEL – carfilzomib + lenalidomide + dexamethasone

Establish primary solution 500 mL of: normal saline

Drug	Dose	CCMB Administration Guideline
<b>Cycle 1</b>		
dexamethasone	40 mg	Orally once daily with food on <b>Days 1, 8, 15 and 22</b> <b>(Self-administered at home)</b> <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 <sup>2</sup>	IV in D5W 100 mL over 30 minutes on <b>Day 1</b>
	70 mg/m <sup>2</sup>	IV in D5W 100 mL over 30 minutes on <b>Days 8 and 15</b>
normal saline	500 mL	Infused over the 1-hour observation period (Post hydration)
lenalidomide	25 mg	Orally once daily on <b>Days 1 to 21</b> , then 7 days off Take with or without food. Swallow whole <b>(Self-administered at home)</b>
<b>Cycles 2 to 12</b>		
dexamethasone	40 mg	Orally once daily with food on <b>Days 1, 8, 15 and 22</b> <b>(Self-administered at home)</b> <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 <sup>2</sup>	IV in D5W 100 mL over 30 minutes on <b>Days 1, 8 and 15</b>
lenalidomide	25 mg	Orally once daily on <b>Days 1 to 21</b> , then 7 days off Take with or without food. Swallow whole <b>(Self-administered at home)</b>
<b>Cycles 13 to 18</b>		
dexamethasone	40 mg	Orally once daily with food on <b>Days 1, 8, 15 and 22</b> <b>(Self-administered at home)</b> <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 <sup>2</sup>	IV in D5W 100 mL over 30 minutes on <b>Days 1 and 15</b>
lenalidomide	25 mg	Orally once daily on <b>Days 1 to 21</b> , then 7 days off Take with or without food. Swallow whole <b>(Self-administered at home)</b>

Cycle 19 onwards		
dexamethasone	40 mg	Orally once daily with food on <b>Days 1, 8, 15 and 22</b> <b>(Self-administered at home)</b>
lenalidomide	25 mg	Orally once daily on <b>Days 1 to 21</b> , then 7 days off Take with or without food. Swallow whole <b>(Self-administered at home)</b>
<b>lenalidomide (Revlimid®) available dosage strengths: 5 mg, 10 mg, 15 mg, 20 mg and 25 mg capsules</b> <b>Classification: Cytotoxic, Hazardous</b>		
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

### 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
- 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  $\beta$ 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
- 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 ( $\beta$ HCG) that must be done within 7 days of the next prescription fill
- Effective November 25<sup>th</sup>, 2021, all **new patients** starting on lenalidomide will be enrolled in Reddy2Assist Program and lenalidomide will be dispensed by CCMB Pharmacy. 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 25<sup>th</sup>, 2021) are currently enrolled in RevAid Program and will continue to have their lenalidomide prescriptions dispensed by the RevAid Registered Pharmacy