

## Regimen Reference Order

### THOR – pembrolizumab + PACLitaxel + CARBOplatin

ARIA: LUNG – [pembro + PACLitaxel + CARBOplatin]

LUNG – [pembrolizumab q 21 days (maintenance)]

LUNG – [pembrolizumab q 42 days (maintenance)]

**Planned Course:** pembrolizumab + PACLitaxel + CARBOplatin every 21 days for 4 cycles, followed by pembrolizumab every 21 days up to 31 cycles or until disease progression or unacceptable toxicity (maximum 2 years of therapy)

OR

pembrolizumab + PACLitaxel + CARBOplatin every 21 days for 4 cycles, followed by pembrolizumab every 42 days up to 16 cycles or until disease progression or unacceptable toxicity (maximum 2 years of therapy)

**Indication for Use:** Lung Cancer Non-Small Cell Squamous Metastatic

**Drug Alert:** Immune Checkpoint Inhibitor (pembrolizumab)

**CVAD:** At Provider's Discretion

#### Proceed with treatment if:

##### **Cycles 1 to 4**

- **ANC equal to or greater than  $1.5 \times 10^9/L$  AND Platelets equal to or greater than  $100 \times 10^9/L$**
- **AST/ALT equal to or less than 3 times the upper limit of normal**
- **Total bilirubin equal to or less than 1.5 times the upper limit of normal**
- **Creatinine clearance is equal to or greater than 30 mL/minute**

##### **pembrolizumab Maintenance**

- **ANC equal to or greater than  $1.5 \times 10^9/L$  AND Platelets equal to or greater than  $50 \times 10^9/L$**
- **AST/ALT equal to or less than 3 times the upper limit of normal**
- **Total bilirubin equal to or less than 1.5 times the upper limit of normal**
- **Creatinine clearance is equal to or greater than 30 mL/minute**

❖ **Contact Physician if parameters not met**

## SEQUENCE OF MEDICATION ADMINISTRATION

### Pre-treatment Requirements

Drug	Dose	CCMB Administration Guideline
Not Applicable		

### Treatment Regimen – THOR – pembrolizumab + PACLitaxel + CARBOplatin

Establish primary solution 500 mL of: normal saline

Drug	Dose	CCMB Administration Guideline
<b>pembrolizumab + PACLitaxel + CARBOplatin (Cycles 1 to 4)</b>		
pembrolizumab	2 mg/kg	IV in normal saline 50 mL over 30 minutes <i>Use 0.2 or 0.22 micron filter</i>
famotidine	40 mg	Orally 1 hour prior to PACLitaxel
aprepitant	125 mg	Orally 1 hour pre-chemotherapy
cetirizine	10 mg	Orally 1 hour prior to PACLitaxel
ondansetron	16 mg	Orally 30 minutes prior to PACLitaxel
dexamethasone	20 mg	IV in normal saline 50 mL over 15 minutes
<b>Wait 30 minutes after completion of IV pre-medications before starting PACLitaxel</b>		
PACLitaxel	200 mg/m <sup>2</sup>	IV in normal saline 500 mL over 3 hours <i>Use non-DEHP bags and non-DEHP administration sets with 0.2 or 0.22 micron filter</i>
CARBOplatin	AUC 6 mg/mL.min; maximum dose 900 mg (see table below)	IV in D5W 250 mL over 30 minutes
<b>pembrolizumab Maintenance (Cycles 1 to 31 OR Cycles 1 to 16)</b>		
pembrolizumab	2 mg/kg (every 21 days) <b>OR</b>	IV in normal saline 50 mL over 30 minutes <i>Use 0.2 or 0.22 micron filter</i>
	4 mg/kg (every 42 days)	IV in normal saline 50 mL over 30 minutes <i>Use 0.2 or 0.22 micron filter</i>
<b>Maximum pembrolizumab dose is 200 mg (every 21 days) or 400 mg (every 42 days)</b>		
All doses will be automatically rounded that fall within the DSG Approved Dose Bands. See THOR DSG – Dose Banding document for more information		

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

## REQUIRED MONITORING

### All Cycles

- CBC, serum creatinine, urea, liver enzymes, total bilirubin, albumin, glucose, electrolytes and TSH as per Physician Orders
- Medical oncologist or designate (i.e. family practitioner in oncology) must assess patient for immune-mediated adverse reactions prior to each cycle
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and O<sub>2</sub> saturation) at baseline and as clinically indicated
- No observation period is required after pembrolizumab and after PACLitaxel administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

### Recommended Support Medications

Drug	Dose	CCMB Administration Guideline
<b>pembrolizumab + PACLitaxel + CARBOplatin (Cycles 1 to 4)</b>		
aprepitant	80 mg	Orally once daily on Days 2 and 3
dexamethasone	8 mg	Orally once daily on Days 2 and 3
metoclopramide	10 – 20 mg	Orally every 4 hours as needed for nausea and vomiting
<b>pembrolizumab Maintenance (Cycles 1 to 31 OR Cycles 1 to 16)</b>		
None Required		

## DISCHARGE INSTRUCTIONS

### All Cycles

- Patient should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge
- Confirm that patient has received the CCMB Immune Checkpoint Inhibitor Medical Alert wallet card
- Reinforce to patient the immune-mediated adverse reactions and importance of reporting immediately
  - For severe symptoms, the patient should be instructed to go to the nearest emergency room. Oncologist on call should be contacted

### Cycles 1 to 4

- Instruct patient to continue taking anti-emetic(s) at home
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

**ADDITIONAL INFORMATION**

- pembrolizumab is an Immune Checkpoint Inhibitor. Consult with oncologist for immune-mediated adverse reactions; corticosteroids are often indicated
- PACLitaxel may cause progressive, irreversible neuropathy
- Upon completion of 4 cycles of LUNG – [pembro + PACLitaxel + CARBOplatin], patients should be started on maintenance treatment with LUNG – [pembrolizumab q 21 days (maintenance)] or LUNG – [pembrolizumab q 42 days (maintenance)]
  - LUNG – [pembrolizumab q 21 days (maintenance)] or LUNG – [pembrolizumab q 42 days (maintenance)] regimen starts three weeks after completing LUNG – [pembro + PACLitaxel + CARBOplatin]
- CARBOplatin dose considerations:
  - CCMB Thoracic DSG uses **actual body weight** to calculate GFR
  - CCMB Thoracic DSG uses a maximum CARBOplatin dose of 900 mg for this regimen
  - If calculated CARBOplatin dose differs **more than 10%** from prescribed CARBOplatin dose, contact the prescriber

**CARBOplatin Dosing Calculations  
per CCMB Thoracic DSG**

*Calculation of CARBOplatin dose: (max.900 mg)*

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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

AUC  
(mg/mL.min)

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6

X

GFR + 25  
(mL/min)

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\_\_\_ + 25

=

Total Dose  
(mg)

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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)*