

## Regimen Reference Order

### THOR – nivolumab + gemcitabine + CISplatin (Neo-Adjuvant)

ARIA: LUNG - [nivo + gem + CIS (neoadj)]

Planned Course: Every 21 days for 3 cycles

Indication for Use: Lung Cancer Non-Small Cell Squamous, Resectable; Neo-Adjuvant

Drug Alert: Immune Checkpoint Inhibitor (nivolumab)

CVAD: At Provider's Discretion

**Proceed with treatment if:**

**Day 1**

- 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 45 mL/minute

**Day 8**

- ANC equal to or greater than  $1.5 \times 10^9/L$  AND Platelets equal to or greater than  $100 \times 10^9/L$
- ❖ **DO NOT DELAY OR CANCEL THERAPY WITHOUT CONSULTING MEDICAL ONCOLOGIST**

#### SEQUENCE OF MEDICATION ADMINISTRATION

##### Pre-treatment Requirements

Drug	Dose	CCMB Administration Guideline
Not Applicable		

#### Treatment Regimen – THOR – nivolumab + gemcitabine + CISplatin (Neo-Adjuvant)

Establish primary solution 500 mL of: normal saline

Drug	Dose	CCMB Administration Guideline
<b>Day 1</b>		
nivolumab	4.5 mg/kg	IV in normal saline 100 mL over 30 minutes <i>Use 0.2 or 0.22 micron filter</i>
magnesium sulfate	2 g	IV in normal saline 1000 mL over 2 hours (Pre hydration)
aprepitant	125 mg	Orally 1 hour pre-chemotherapy
ondansetron	16 mg	Orally 30 minutes pre-chemotherapy
dexamethasone	12 mg	Orally 30 minutes pre-chemotherapy
OLANzapine	2.5 mg	Orally 30 minutes pre-chemotherapy
gemcitabine	$1000 \text{ mg/m}^2$	IV in normal saline 250 mL over 30 minutes

CISplatin	75 mg/m <sup>2</sup>	IV in normal saline 500 mL over 1 hour <i>*Alert: CISplatin infusion must be completed prior to mannitol administration</i>
mannitol	12.5 g	IV in normal saline 1000 mL over 2 hours (Post hydration)
<b>Day 8</b>		
dexamethasone	8 mg	Orally 30 minutes pre-chemotherapy
gemcitabine	1000 mg/m <sup>2</sup>	IV in normal saline 250 mL over 30 minutes
<b>Maximum nivolumab dose is 360 mg</b> 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

All Cycles

Day 1

- CBC, serum creatinine, urea, electrolytes, liver enzymes, total bilirubin, albumin, glucose 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
- Baseline blood pressure immediately prior to magnesium infusion and repeat 15 minutes after start of magnesium infusion
- No observation period is required after nivolumab administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

Day 8

- CBC

## Recommended Support Medications

Drug	Dose	CCMB Administration Guideline
aprepitant	80 mg	Orally once daily on Days 2 and 3
dexamethasone	8 mg	Orally once daily on Days 2 to 4
OLANzapine	2.5 mg	Orally the evening of Day 1 then twice daily on Days 2, 3 and 4. Also use OLANzapine 2.5 to 5 mg AS NEEDED for breakthrough nausea and vomiting (including Days 1 to 4) up to a maximum of 10 mg per day. Contact clinic if nausea/vomiting is not adequately controlled

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## DISCHARGE INSTRUCTIONS

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### All Cycles

- Patients 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
- 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

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## ADDITIONAL INFORMATION

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- nivolumab is an Immune Checkpoint Inhibitor. Consult with oncologist for immune-mediated adverse reactions; corticosteroids are often indicated
- Thoracic Surgeon will order and assess morning cortisol and TSH pre-operative to assess for preoperative immune-related endocrinopathies
- CISplatin is ototoxic and nephrotoxic
- CISplatin can cause hypomagnesemia