# Regimen Reference Order – BRST – AC + PACLitaxel + trastuzumab

**ARIA: BRST - [AC + q7d PACLitaxel + tras]**

**Planned Course:** **AC every 21 days for 4 cycles, followed by PACLitaxel and trastuzumab every week for 12 weeks (1 cycle = 21 days), followed by trastuzumab every 21 days for 14 doses**

**Indication for Use:** **Breast Cancer Adjuvant or Neo-Adjuvant; HER2 positive**

**CVAD: Preferred (VESICANT INVOLVED)**

***Proceed with treatment if:***

***Cycles 1 to 4 (AC)***

- ***ANC equal to or greater than 1 x $10^9$/L AND Platelets equal to or greater than 100 x $10^9$/L***
- ***Creatinine clearance greater than 10 mL/minute***
- ***Bilirubin less than upper limit of normal***
- ***AST/ALT less than 2 times upper limit of normal***

***Cycles 5 to 8 (PACLitaxel + trastuzumab)***

- ***ANC equal to or greater than 1 x $10^9$/L AND Platelets equal to or greater than 100 x $10^9$/L***
- ***Bilirubin less than 1.25 times upper limit of normal***
- ***AST/ALT less than 10 times upper limit of normal***

***Cycle 9 (trastuzumab every 21 days)***

- ***Blood work at provider's discretion: not required to proceed with treatment***
  - ❖ **Contact Physician 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 |
|---|---|---|
| **Cycles 1 to 4 – AC** | | |
| Instruct patient to start vigorous oral pre-hydration (600-900 mL) the morning of cyclophosphamide treatment **(Self-administered at home)** | | |

### Treatment Regimen – BRST – AC + PACLitaxel + trastuzumab

**Establish primary solution 500 mL of: normal saline**

| Drug | Dose | CCMB Administration Guideline |
|---|---|---|
| **Cycles 1 to 4 – AC** | | |
| 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 |
| DOXOrubicin | 60 mg/m$^2$ | IV Push over 10 to 15 minutes |
| cyclophosphamide | 600 mg/m$^2$ | IV in normal saline 250 mL over 1 hour |
| **Cycle 5 – PACLitaxel + trastuzumab** | | |
| trastuzumab (brand name specific) | 4 mg/kg<br>Loading Dose | IV in normal saline 250 mL over 90 minutes on **Day 1**<br>**Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order*<br>**Nursing Alert: PACLitaxel infusion begins after observation period is complete* |
| | 2 mg/kg | IV in normal saline 250 mL over 30 minutes on **Days 8 and 15**<br>**Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* |
| cetirizine | 20 mg | Orally 1 hour prior to PACLitaxel on **Days 1, 8 and 15** |
| dexamethasone | 20 mg | IV in normal saline 50 mL over 15 minutes **1 hour** prior to PACLitaxel on **Days 1, 8 and 15**<br>**Nursing Alert: PACLitaxel starts **1 hour after completion** of dexamethasone infusion* |
| **Wait 1 hour after completion of IV pre-medication(s) before starting PACLitaxel** | | |
| PACLitaxel | 80 mg/m$^2$ | IV in normal saline 250 mL over 1 hour on **Days 1, 8 and 15**, following the administration rates below:<br>• Administer at 100 mL/hour for 15 minutes, then<br>• Administer remaining volume over 45 minutes<br>*Use non-DEHP bags and non-DEHP administration sets with 0.2 or 0.22 micron filter*<br>**Nursing Alert: Gently invert bag 8 to 10 times immediately prior to administration of PACLitaxel to evenly distribute the drug* |
| **Cycle 6 to 8 – PACLitaxel + trastuzumab** | | |
| trastuzumab (brand name specific) | 2 mg/kg | IV in normal saline 250 mL over 30 minutes on **Days 1, 8 and 15**<br>**Alert: Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* |
| cetirizine | 20 mg | Orally 1 hour prior to PACLitaxel on **Days 1, 8 and 15** |
| dexamethasone | 20 mg | IV in normal saline 50 mL over 15 minutes **1 hour** prior to PACLitaxel on **Days 1, 8 and 15**<br>**Nursing Alert: PACLitaxel starts **1 hour after completion** of dexamethasone infusion* |
| **Wait 1 hour after completion of IV pre-medication(s) before starting PACLitaxel** | | |

| | | |
|---|---|---|
| PACLitaxel | 80 mg/m$^2$ | IV in normal saline 250 mL over 1 hour on **Days 1, 8 and 15**, following the administration rates below:<br>• Administer at 100 mL/hour for 15 minutes, then<br>• Administer remaining volume over 45 minutes<br>*Use non-DEHP bags and non-DEHP administration sets with 0.2 or 0.22 micron filter*<br>**Nursing Alert:* *Gently invert bag 8 to 10 times immediately prior to administration of PACLitaxel to evenly distribute the drug* |
| **Cycle 9 – trastuzumab every 21 days** | | |
| trastuzumab (brand name specific) | 6 mg/kg | IV in normal saline 250 mL over 30 minutes every 21 days for 14 doses<br>**Alert:* *Ensure brand name on prescription label (indicated in brackets on prescription label) matches prescribed order* |
| 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

Hepatitis B serology
- Hepatitis B surface antigen and Hepatitis B core antibody (drawn within preceding 5 years)

Cardiac monitoring
- Left Ventricular Ejection Fraction (LVEF) monitoring recommended
  - During AC treatment: At baseline and after Cycle 4 as per Physician Orders
  - During trastuzumab treatment: Every 4 doses (i.e. 12 weeks) as per Physician Orders

Cycles 1 to 4 (AC)
- CBC and biochemistry as per Physician Orders

Cycles 5 to 8 (PACLitaxel + trastuzumab)

Day 1
- CBC and liver enzymes as per Physician Orders
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and $O_2$ saturation) at baseline and as clinically indicated
- Cycle 5, Day 1 only: Observe patient for 30 minutes after administration of trastuzumab (first dose). Full vital signs after observation period is complete. PACLitaxel infusion begins after observation period is complete
- No observation period required after PACLitaxel administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

Days 8 and 15
- CBC as per Physician Orders
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and $O_2$ saturation) at baseline and as clinically indicated
- No observation period required after trastuzumab or PACLitaxel administration. Patient can be discharged from treatment room if stable whether they had a reaction or not

Cycle 9 (trastuzumab)
- Full vital signs (temperature, heart rate, respiratory rate, blood pressure and $O_2$ saturation) at baseline and as clinically indicated
- No observation period required after trastuzumab 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 |
|---|---|---|
| **Cycles 1 to 4 – AC** | | |
| aprepitant | 80 mg | Orally on Days 2 and 3 |
| dexamethasone | 8 mg | Orally once daily on Days 2, 3 and 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 |
| **Cycles 5 to 8 – PACLitaxel + trastuzumab** | | |
| metoclopramide | 10 – 20 mg | Orally every 4 hours as needed for nausea and vomiting |
| **Cycle 9 – trastuzumab every 21 days** | | |
| None required | | |

## DISCHARGE INSTRUCTIONS

Cycles 1 to 4 (AC)

- Instruct patient to:
  - Continue taking anti-emetic(s) at home. Patients should be instructed not to use OLANZapine and metoclopramide concurrently due to drug interactions
  - 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 after each dose of cyclophosphamide
  - Obtain immediate assistance as per your clinic's contact instructions if:
    - Symptoms of hemorrhagic cystitis (e.g. dysuria, hematuria)
    - Unable to drink recommended amount of fluid
- Reinforce applicable safe handling precautions of medications, blood and body fluids for 48 hours after completion of chemotherapy

Cycle 5 to 8 (PACLitaxel + trastuzumab)

- Patients should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge
- 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

Cycle 9 (trastuzumab every 21 days)

- Patients should be instructed to contact their cancer team immediately if symptoms of hypersensitivity reactions occur after discharge

## ADDITIONAL INFORMATION

- PACLitaxel may cause progressive, irreversible neuropathy
- Cumulative DOXOrubicin dose should be calculated and should not exceed 360 mg/m$^2$. If exceeding 360 mg/m$^2$, consideration to adding dexrazoxane should be given if patient is benefiting from DOXOrubicin therapy
- Reassess trastuzumab dose with significant weight changes
- 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
- trastuzumab is available from more than one manufacturer and uses several different brand names. Brand name will be indicated in brackets after trastuzumab. **Ensure prescription label matches the brand name on prescribed order**
- **ARIA ordering: Note: At Cycle 8**, an entry called "***Physician Reminder - Order remaining trastuzumab 1 Units Insert Miscellaneous once"*** will appear in the electronic drug order. No action is required. **This prompt is to remind the prescriber to order single agent trastuzumab which begins at Cycle 9**