Breast Cancer

AC (DOXOrubicin/Cyclophosphamide) Every 21 Days followed by DOCEtaxel Every 21 Days + Trastuzumab

AC (DOXOrubicin/Cyclophosphamide) Every 21 Days Course

INDICATION:

HER2 positive: Neoadjuvant or Adjuvant

REFERENCES:

1. NCCN Guidelines® for Breast Cancer V.1.2017.
2. Slamon D, et al. *N Engl J Med.* 2011;365(14):1273-83.[a]
3. Joensuu H, et al. *N Engl J Med.* 2006;354(8):809-20.[a]

NCCN SUPPORTIVE CARE:

1. *Emetic risk:* Day 1 High
2. *Febrile Neutropenia Risk:* Intermediate

CHEMOTHERAPY REGIMEN

21-day cycle for 4 cycles

- **DOXOrubicin** 60 mg/m² IV push on Day 1
  - See *Safety Parameters and Special Instructions* for information on slow IV Push administration.
- **Cyclophosphamide** 600 mg/m² IV over 30 minutes on Day 1
  - Oral hydration is strongly encouraged with cyclophosphamide; poorly hydrated patients may need supplemental IV hydration. Patients should attain combined oral and IV hydration of 2000 – 3000 mL/day on day of chemotherapy.
    See *Other Supportive Therapy* for example of IV hydration.

This course is 4 cycles of AC (DOXOrubicin and cyclophosphamide) Every 21 Days. DOCEtaxel Every 21 Days and Trastuzumab course is initiated following completion of this course. Please see Order Template BRS27b for DOCEtaxel Every 21 Days and Trastuzumab course.

SUPPORTIVE CARE

Antiemetic Therapy

Scheduled prophylactic antiemetic therapy should be given for prevention of acute and delayed nausea and vomiting based on the emetic risk of the chemotherapy regimen. This may include antiemetic therapy given on the days following chemotherapy. For more information on emetic prophylaxis, refer to the NCCN Guidelines for Antiemesis and Appendix D to the NCCN Chemotherapy Order Templates.

PRN for breakthrough: All patients should be provided with at least one medication for breakthrough emesis. Please consult the NCCN Guidelines for Antiemesis for appropriate antiemetic therapy.

Myeloid Growth Factor Therapy

- CSFs may be considered for primary prophylaxis based on the febrile neutropenia (FN) risk of the chemotherapy regimen. For more information on prophylaxis of FN, refer to NCCN Guidelines for Myeloid Growth Factors and Appendix C to the NCCN Templates.

Other Supportive Therapy

- For cyclophosphamide: *Example of recommended hydration*: Sodium chloride 0.9% infused IV at a rate of 1.5 – 3 mL/kg/hour for a total of 500 mL on day of chemotherapy.

MONITORING AND HOLD PARAMETERS

- CBC with differential should be monitored as clinically indicated for potential dose modification.
- For DOXOrubicin:
  - Ejection fraction should be monitored prior to initiation of treatment and as clinically indicated.
  - This agent is an anthracycline. Cumulative anthracycline dosage should be monitored.
  - Liver function should be monitored as clinically indicated for potential dose modification or discontinuation.
- For cyclophosphamide: Renal function should be monitored as clinically indicated for potential dose modification or discontinuation.

SAFETY PARAMETERS AND SPECIAL INSTRUCTIONS

- For DOXOrubicin:
  - **This agent is a vesicant.**
  - This agent is administered IV push. The preferred IV push method for a vesicant is administration through the side port of a freely flowing IV; alternatively, the drug can be administered via direct IV push.
  - Secondary malignancies have been associated with this drug. Review drug package insert for additional information.
  - Central venous access is recommended for administration of this agent.
- For cyclophosphamide: Secondary malignancies have been associated with this drug. Review drug package insert for additional information.