NCCN Core Activities

- Clinical Practice Guidelines
- Drugs and Biologics Compendium
- Chemotherapy Orders Templates
- Information Systems Collaborations
- Patient Information
- Outcomes Project
- Oncology Research Program
- Best Practices
- Health Policy
Goals of NCCN Guidelines

• Improve patient care and outcomes
• Identify evidence basis for treatment strategies
• Identify patient subsets who should receive specific treatments
• Provide range of appropriate choices
• Increase safety of oncology care
Guidelines Provide Recommendations for Treatment

NCCN® Practice Guidelines in Oncology – v1.2010

Invasive Breast Cancer

SYSTEMIC ADJUVANT TREATMENT - HORMONE RECEPTOR NEGATIVE - HER2 POSITIVE DISEASE

- Tumor ≤ 0.5 cm or
- Microinvasive
  - pN0
  - pN1mi

- Tumor 0.5-1.0 cm

- Tumor > 1 cm

Histology:
- Ductal
- Lobular
- Mixed
- Metaplastic

Node positive (one or more metastases > 2 mm to one or more ipsilateral axillary lymph nodes)

Adjuvant chemotherapy + trastuzumab (category 1)

See Follow-Up (BIN-15)
See Adjuvant Chemotherapy (BIN-V)

See Principles of HER2 Testing (BIN-A)

Mixed lobular and ductal carcinoma as well as metaplastic carcinoma should be graded based on the ductal component and treated based on this grading. The metaplastic or mixed component does not affect prognosis.

There are insufficient data to make chemotherapy recommendations for those over 70 y old. Treatment should be individualized with consideration of comorbid conditions.

The prognosis of patients with T1a and T2 tumors that are node negative is generally favorable even when HER2 is amplified or over-expressed. This is a population of breast cancer patients that was not studied in the available randomized trials. The decision for use of trastuzumab therapy in this cohort of patients must balance the known toxicities of trastuzumab, such as cardiac toxicity, and the uncertain, absolute benefits that may exist with trastuzumab therapy.

Note: All recommendations are category 2A unless otherwise indicated.

Clinical Trials: NCCN believes that the best management of any cancer patient is in a clinical trial. Participation in clinical trials is especially encouraged.
# Specific Chemotherapy Recommendations

## Invasive Breast Cancer

### Adjuvant Chemotherapy

<table>
<thead>
<tr>
<th>Non-TRASTUZUMAB Containing Regimen 3 (all category 1)</th>
<th>Trastuzumab Containing Regimen (all category 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preferred Adjunct Regimen:</strong></td>
<td><strong>Preferred Adjunct Regimen:</strong></td>
</tr>
<tr>
<td>- TAC (docetaxel/doxorubicin/cyclophosphamide)</td>
<td>- AC followed by T + concurrent trastuzumab</td>
</tr>
<tr>
<td>- Dose-dense AC (doxorubicin/cyclophosphamide) every 2 weeks</td>
<td>(doxorubicin/cyclophosphamide followed by paclitaxel plus trastuzumab, various schedules)</td>
</tr>
<tr>
<td>- AC (doxorubicin/cyclophosphamide) followed by weekly paclitaxel</td>
<td>- TCH (docetaxel, carboplatin, trastuzumab)</td>
</tr>
<tr>
<td>- TC (docetaxel and cyclophosphamide)</td>
<td>- Docetaxel + trastuzumab followed by FEC</td>
</tr>
<tr>
<td>- Doxorubicin/cyclophosphamide</td>
<td>(fluorouracil/cisplatin/cyclophosphamide)</td>
</tr>
<tr>
<td>- Other Adjunct Regimens:</td>
<td>- Chemotherapy followed by trastuzumab sequentially</td>
</tr>
<tr>
<td>- FAC/CAF (fluorouracil/doxorubicin/cyclophosphamide)</td>
<td>- AC followed by docetaxel + trastuzumab</td>
</tr>
<tr>
<td>- FEC (cyclophosphamide/doxorubicin/fluorouracil)</td>
<td>- Nocadjuvant:</td>
</tr>
<tr>
<td>- CMF (cyclophosphamide/methotrexate/fluorouracil)</td>
<td>- T + trastuzumab followed by CEF + trastuzumab</td>
</tr>
<tr>
<td>- AC followed by docetaxel every 3 weeks</td>
<td>(paclitaxel plus trastuzumab followed by</td>
</tr>
<tr>
<td>- EC (epirubicin/cyclophosphamide)</td>
<td>cyclophosphamide)</td>
</tr>
<tr>
<td>- A followed by T followed by C (doxorubicin followed by paclitaxel followed by cyclophosphamide) every 2 weeks with filgrastim support</td>
<td>- FEC followed by T</td>
</tr>
<tr>
<td>- FEC followed by T</td>
<td>(fluorouracil/cyclophosphamide followed by docetaxel)</td>
</tr>
<tr>
<td>- T (fluorouracil/cyclophosphamide followed by docetaxel)</td>
<td>- FEC followed by weekly paclitaxel</td>
</tr>
</tbody>
</table>

---

1. Retrospective evidence suggests that anthracycline-based chemotherapy regimens may be superior to non-anthracycline-based regimens in patients with HER2 positive tumors.
2. In patients with HER2-positive and axillary lymph node positive breast cancer, trastuzumab should be incorporated into the adjuvant therapy. (category 1) Trastuzumab should also be considered for patients with HER2-positive lymph node-negative tumors greater than or equal to 1 cm. (category 1) Trastuzumab may be given beginning either concurrent with paclitaxel as part of the AC followed by paclitaxel regimen, or alternatively after the completion of chemotherapy. Trastuzumab should not be given concurrently with an anthracycline because of cardiac toxicity, except as part of the neoadjuvant trastuzumab with paclitaxel regimen followed by CMF regimen. Trastuzumab should be given for one year, (with the exception of the docetaxel + trastuzumab followed by FEC regimen in which trastuzumab is given for 9 weeks), with cardiac monitoring, and by either the weekly or every three weekly schedule.
3. CMF and radiation therapy may be given concurrently, or the CMF may be given first. All other chemotherapy regimens should be given prior to radiotherapy.
4. Chemotherapy and tamoxifen are usually used as adjuvant therapy should be given sequentially with tamoxifen following chemotherapy.
5. Randomized clinical trials demonstrate that the addition of a taxane to anthracycline-based chemotherapy provides an improved outcome.
Specific Regimens

Invasive Breast Cancer

<table>
<thead>
<tr>
<th>NON-Trastuzumab Containing Regimens (all category 1)</th>
<th>TRASTUZUMAB Containing Regimens (all category 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred Adjuvant Regimens:</td>
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</tr>
<tr>
<td>TAC (docetaxel/doxorubicin/cyclophosphamide)</td>
<td>AC followed by T + concurrent trastuzumab (doxorubicin/cyclophosphamide followed by paclitaxel plus trastuzumab, various schedules)</td>
</tr>
<tr>
<td>Dose-dense AC (doxorubicin/cyclophosphamide) followed by paclitaxel every 2 weeks</td>
<td><strong>ITC</strong> (docetaxel, carboplatin, trastuzumab)</td>
</tr>
<tr>
<td>AC (doxorubicin/cyclophosphamide) followed by weekly paclitaxel</td>
<td>Other Adjuvant Regimens:</td>
</tr>
<tr>
<td>TC (docetaxel and cyclophosphamide)</td>
<td>Docetaxel + trastuzumab followed by FEC (fluorouracil/epirubicin/cyclophosphamide)</td>
</tr>
<tr>
<td>AC (docorubicin/cyclophosphamide)</td>
<td>Chemotherapy followed by trastuzumab sequentially</td>
</tr>
<tr>
<td>Other Adjuvant Regimens:</td>
<td>AC followed by docetaxel + trastuzumab</td>
</tr>
<tr>
<td>FAC/CAF (fluorouracil/doxorubicin/cyclophosphamide)</td>
<td>Neoadjuvant:</td>
</tr>
<tr>
<td>FEC/CEF (cyclophosphamide/doxorubicin/fluorouracil)</td>
<td>T + trastuzumab followed by CEF + trastuzumab (paclitaxel plus trastuzumab followed by cyclophosphamide/epirubicin/flourouracil plus trastuzumab)</td>
</tr>
<tr>
<td>CMF (cyclophosphamide/methotrexate/fluorouracil)</td>
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</tr>
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<td>A followed by T followed by C (docetaxel followed by paclitaxel followed by cyclophosphamide), every 2 weeks regimen with filgrastim support</td>
<td></td>
</tr>
<tr>
<td>FEC followed by T</td>
<td></td>
</tr>
<tr>
<td>(fluorouracil/epirubicin/cyclophosphamide followed by docetaxel)</td>
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<td></td>
</tr>
</tbody>
</table>

The selection, dosing, and administration of anti-cancer agents and the management of associated toxicities are complex. Modifications of drug dose and schedule and initiation of supportive care interventions are often necessary because of expected toxicities and because of individual patient variability prior treatment, and comorbidities. The optimal delivery of anti-cancer agents therefore requires a health care delivery team experienced in the use of antineoplastic agents and the management of associated toxicities in patients with cancer.

1. Retrospective evidence suggests that anthracycline-based chemotherapy regimens may be superior to non-anthracycline-based regimens in patients with HER2 positive tumors.
2. In patients with HER2 positive and axillary lymph node positive breast cancer, trastuzumab should be incorporated into the adjuvant therapy. (category 1)
3. Trastuzumab should also be considered for patients with HER2 positive lymph node negative tumors greater than or equal to 1 cm, (category 1)
4. Trastuzumab may be given beginning either concurrent with paclitaxel as part of the AC followed by paclitaxel regimen, or alternatively after the completion of chemotherapy.
5. Trastuzumab should not be given concurrent with an anthracycline because of cardiac toxicity, except as part of the neoadjuvant trastuzumab with paclitaxel followed by CEF regimen. Trastuzumab should be given for one year, (with the exception of the docetaxel + trastuzumab followed by FEC regimen in which trastuzumab is given for 9 weeks), with cardiac monitoring, and by either the weekly or every three weekly schedule.
6. CMF and radiation therapy may be given concurrently, or the CMF may be given first. All other chemotherapy regimens should be given prior to radiation therapy.
7. Chemotherapy and tamoxifen used as adjuvant therapy should be given sequentially with tamoxifen following chemotherapy.
8. Randomized clinical trials demonstrate that the addition of a taxane to anthracycline-based chemotherapy provides an improved outcome.

Note: All recommendations are category 2A unless otherwise indicated.

Clinical Trials: NCCN believes that the best management of any cancer patient is in a clinical trial. Participation in clinical trials is especially encouraged.
Directions for Administering Chemotherapy

Clinical Recommendations

NCCN Chemotherapy Order Templates™

Breast Cancer - Invasive

- Neoadjuvant
  - PACLitaxel Q21D + Trastuzumab + sequential FEC (Fluorouracil/Epirubicin/Cyclophosphamide) + Trastuzumab - FEC + Trastuzumab course
  - PACLitaxel Q21D + Trastuzumab + sequential FEC (Fluorouracil/Epirubicin/Cyclophosphamide) + Trastuzumab - PACLitaxel + Trastuzumab course

- Adjuvant
  - AC (DOXorubicin/Cyclophosphamide) Q21D + sequential DOCItaxel Q21D + Trastuzumab - AC course
  - AC (DOXorubicin/Cyclophosphamide) Q21D + sequential DOCItaxel Q21D + Trastuzumab - DOCItaxel + Trastuzumab course
  - AC (DOXorubicin/Cyclophosphamide) Q21D + sequential PACLitaxel Q21D - AC course
  - AC (DOXorubicin/Cyclophosphamide) Q21D + sequential PACLitaxel Q21D

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NCCN Drugs & Biologic Compendium™
NCCN Clinical Practice Guidelines in Oncology™
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NCCN Clinical Practice Guidelines in Oncology™
NCCN Drugs & Biologic Compendium™
Breast Cancer - Invasive

- Neoadjuvant
  - PACL/taxel Q21D + Trastuzumab + sequential FEC
    (Fluorouracil/Epirubicin/IV Cyclophosphamide) + Trastuzumab - FEC +
    Trastuzumab course
  - PACL/taxel Q21D + Trastuzumab + sequential FEC
    (Fluorouracil/Epirubicin/IV Cyclophosphamide) + Trastuzumab -
    PACL/taxel + Trastuzumab course

- Adjuvant
  - AC (DOCXrubin/Cyclophosphamide) Q21D + sequential DOCEtaxel
    Q21D + Trastuzumab - AC course
  - AC (DOCXrubin/Cyclophosphamide) Q21D + sequential PACLtaxel
    Q21D + Trastuzumab - DOCEtaxel + Trastuzumab course
  - AC (DOCXrubin/Cyclophosphamide) Q21D + sequential DOCEtaxel
    Q21D + Trastuzumab - AC course
  - AC (DOCXrubin/Cyclophosphamide) Q21D + sequential PACLtaxel
    Q21D - AC course
Chemotherapy Order Template

**Chemotherapy Order Template™**

**Breast Cancer**  
**AC (DOXorubicin/Cyclophosphamide) Every 21 Days**  
+ DOCEtaxel Every 21 Days + Trastuzumab

**AC (DOXorubicin/Cyclophosphamide) Every 21 Days Course**

**INDICATION:**  
Adjuvant

**REFERENCES:**  
1. NCCN Clinical Practice Guidelines in Oncology (Breast Cancer).  
2. [Drug Information for Health Care Providers](https://www.nccn.org/professionals/physician_gls/pdf/anthracyclines.pdf)

**NCCN SUPPORTIVE CARE:**  
1. Febrile Risk Day 1 High  
2. Fever neutropenia risk: Intermediate

**CHEMOTHERAPY REGIMEN**  
21-day cycle for 4 cycles

- **DOXorubicin 60 mg/m² IV Push on Day 1**
- **Docetaxel 75 mg/m² IV over 30 minutes on Day 1**
- **Cyclophosphamide 605 mg/m² IV over 30 minutes on Day 1**
- **G-CSF**

**Panel A:**
- Daily oral hydration is encouraged with cyclophosphamide. Supportive therapy may be needed for hydration
- Patients should be counseled on oral and IV hydration of 2–3 L/day on day of chemotherapy

See [NCCN Supportive Care](https://www.nccn.org/professionals/physician_gls/pdf/cytoprotective.pdf) for additional guidelines.

This package is a key component of AC (DOXorubicin and cyclophosphamide) every 21 days.  
**DOCEtaxel Every 21 Days** and **Trastuzumab** are initiated following completion of this course.  
Please see [Order Template BR172b for DOCEtaxel Every 21 Days and trastuzumab course](https://www.nccn.org/professionals/physician_gls/pdf/cytotoxic.pdf).

**SUPPORTIVE CARE**

- **Anthracycline therapy:** [See NCCN Professional’s guide to anthracyclines](https://www.nccn.org/professionals/physician_gls/pdf/anthracyclines.pdf)

**Days 1–4**
- **Apresoline 0.25 mg PO or fosaprenalin 118 mg IV Day 1, 0.25 mg PO Days 2–3**
- **Dexamethasone 12 mg PO IV Days 1–4**
- **P3K/Akt inhibitor** (recommended on days of highly emetogenic chemotherapy administration)

**Days 5–7**
- **Cetuximab 0.5 mg IV Day 1**
  - **On Day 1:**
    - **Dexamethasone 2 mg PO daily or 1 mg PO 24 hours prior to first dose of chemotherapy**
    - **Dexamethasone 1 mg subcutaneous 24–48 hours prior to first dose of chemotherapy**
    - **Dexamethasone 1 mg subcutaneous 24–48 hours prior to first dose of chemotherapy**

**Other supportive care options:**
- **P3K/Akt inhibitor**

**Template continued on page 2**

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07/17/2020
Using the Templates

Regimen

Chemotherapy Order Template™
Breast Cancer
AC (Doxorubicin/Cyclophosphamide) Every 21 Days
• DOXOxene 52 mg/m² IV Push on Day 1
• See Safety Precautions and Capital 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 receive mannitol and IV hydration of 2-5 liters on Day of chemotherapy.

See Other Supportive Therapy for example of recommended hydration.

This course is 4 cycles of AC (Doxorubicin and cyclophosphamide) every 21 Days.

Supportive Care

(See www.nccn.org/professionals/physician_d.k/PDF/fanemergencies.pdf)
• Day 1:
  • Acetaminophen 125 mg PO or fusoleptan 115 mg IV Day 1, aspirin 65 mg PO Days 2 – 3
  • Dexamethasone 12 mg PO/IV Days 1 – 4
  • 0.175 mg/m² recommended on days of highly emetogenic chemotherapy administration.
• Day 2:
  • Fentanyl 25 mg IV Day 1
  • On Day 2 and 3:
  • 100 mg PO or 1.5 mg/m² IV on 100 mg IV Day 1
  • 1 mg PO daily for 1 mg PO BID or 30 mg/m² maximum 1 mg IV daily Day 1 or transdermal patch containing 54 mg given twice a day to provide continuous delivery of chemotherapy (patch supplies 5 days of intradermal drug starting 34 hours after application)
  • Oral Cisplatin 11 – 24 mg/m² or 6 – 12 mg maximum 32 mg/m² IV Day 1
  • Zoladex 0.5 – 2 mg PO or subcutaneously every 04 or every 6 hours as needed Days 1 – 4
  • A 34 blocker or proton pump inhibitor

Template continued on page 2

This template is a provisional statement of the consensus of its authors derived from the NCCN Clinical Practice Guidelines in Oncology™ regarding cancer therapy currently accepted approaches for management of patients. It is not intended to include all possible approaches or to exclude any reasonable approach or therapy. This template is expected to use independent medical judgment in the context of individual clinical circumstances of each specific patient's case or treatment. NCCN does not endorse, express or imply accord non-indication, without limitation, become意见 to the applicability, appropriateness, completeness or comprehensiveness of any representation regarding the case or the results of the use of the template in treatment, its use, and the clinical decision-making process of any patient or the responsibility of clinical practice.
**Indication**

**Chemotherapy Order Template™**

**Breast Cancer**

AC (Doxorubicin/Cyclophosphamide) Every 21 Days

→ DOCEtaxel Every 21 Days + Trastuzumab

**AC (Doxorubicin/Cyclophosphamide) Every 21 Days Course**

<table>
<thead>
<tr>
<th>INDICATION: Adjunct</th>
<th>REFERENCES</th>
<th>NCCN SUPPORTIVE CARE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. NCCN Clinical Practice Guidelines in Oncology</td>
<td>1. Emetic Risk: Day 1 High</td>
</tr>
<tr>
<td></td>
<td>2. Vogelsová et al., Oncology 2010</td>
<td>2. Fever neutropenia Risk: Intermediate</td>
</tr>
</tbody>
</table>

**Chemotherapy Regimen**

5-day cycle for 6 cycles

- Doxorubicin 50 mg/m² IV Push or Dilute and Infuse
- See Safety Parameters and Special Instructions for intravenous administration.
- Cyclophosphamide 600 mg/m² IV over 20 minutes on Day 1
- One hour hydration is strongly encouraged with cyclophosphamide poorly soluble in low-osmolar venous hydration.
- Parenteral hydration volumes are and inhydration of 0.5–1 L/day on Day 1

See Other Supportive Therapy for example of recommended 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.

**Supportive Care**

(From www.nccn.org/practiceguidelines/oncology_dk/DCFartemisinid.pdf)

- Days 1–4
  - Aprepitant 125 mg PO or fosaprepitant 115 mg IV Day 1, ondansetron 80 mg PO Days 2–3
  - Dexamethasone 12 mg PO IV Days 1–4
  - 0.375 mg 24-hour infusion (on days of highly emetogenic chemotherapy administration)
  - Pyridoxine 25 mg IV Day 1
- OR
  - Dolasetron 250 mg PO or 1.5 mg IV or 100 mg IV Day 1
  - Granisetron 2 mg PO daily or 1 mg PC BID or 0.3 mg/kg (maximum 1 mg) IV daily Day 1 or transdermal patch containing 34.2 mg granisetron applied 24–48 hours prior to first dose of chemotherapy (patch supplied 6 days of therapeutic drug starting 24 hours after application)
  - Ondansetron 16–32 mg PO or 1–2 mg (maximum 32 mg/kg) IV Day 1
  - 
  - atenolol 0.5–2 mg PO or sublingual every 4–8 hours as needed Days 1–4
- 
- 

**Template continued on page 2**

This template is a prescreened statement of the consensus of its authors derived from the NCCN Clinical Practice Guidelines in Oncology regarding when to provide supportive care. Supportive care is individualized for each patient. Applicable care may include multiple drug regimens or other supportive care. This template is a prescreened statement of the consensus of its authors derived from the NCCN Clinical Practice Guidelines in Oncology regarding when to provide supportive care. Supportive care is individualized for each patient. Applicable care may include multiple drug regimens or other supportive care.
Using the Templates

References

This page contains information about chemotherapy regimens and supportive care. It includes references to clinical practice guidelines and other sources used in the development of the templates. The templates are intended to provide a standardized approach to chemotherapy administration and supportive care management.
Using the Templates

NCCN

Chemotherapy Order Template™
Breast Cancer

AC (DOXorubicin/Cyclophosphamide) Every 21 Days
→DOCETaxel Every 21 Days + Trastuzumab

AC (DOXorubicin/Cyclophosphamide) Every 21 Days Course

INDICATION:
Adjuvant

REFERENCES:
1. NCCN Clinical Practice Guidelines in Oncology. Breast Cancer Version 4.2020,
   14 March 2020

NCN SUPPORTIVE CARE:
1. Emesis: Risk: Day 1: High
2. Fever neutropenia: Risk: Intermediate

Supportive Care

Available at www.nccn.org/professionals/physician.pdf (PDF file is accessible)

Days 1 - 4
- Aprepitant 125 mg PO or fosaprepitant 114 mg IV Day 1, ondansetron 8 mg PO Days 2 - 3
- Dexamethasone 12 mg PO IV Days 1 - 4
- 6-132 antepont (recommended by the National Comprehensive Cancer Network/ACOG) on days of highly emetogenic chemotherapy administration:
  - Fentanyl 25 mg IV Day 1
  - OR
  - Dexamethasone 100 mg PO or 3.0 mg IV Day 1
  - OR
  - Granisetron 2 mg PO daily or 1 mg PO BID or 0.3 mg/kg (maximum 1 mg) IV daily Day 1 or transdermal patch containing
  - 24 - 48 hours prior to first dose of chemotherapy (patch supplies 5 days of therapeutic drug delivery, starting 24 hours after application)
  - OR
  - Granisetron 11 - 14 mcg/mq or 8 - 12 mg (maximum 32 mg/kg)/day I
  - OR
  - a Lurasertan 0.5 - 2 mg PO/IV or sublingual every 4 or 6 hours as needed Days 1 - 4
  - a H1, H2 blocker or proton pump inhibitor

Template continued on page 2

This template is a patient-centric statement of the consensus of its authors derived from the NCCN Clinical Practice Guidelines in Oncology regarding supportive care, in which the determination of a patient's need is made by the treating physician. This template is not intended as a substitute for comprehensive medical advice or education. The recommendations are provided to guide the reader in making decisions related to the patient's care. The NCCN does not warrant that the absence or exclusion of any representation concerning the care or the results of the care of the patient. The NCCN does not recommend any representation concerning the care or the results of the care of the patient. The NCCN does not assume any responsibility for any damages, including, without limitation, losses of data, loss of income or profit, loss of business, or any other special, direct, indirect, incidental, punitive, or consequential damages arising out of or in connection with the use of this template, including, without limitation, losses of data, loss of income or profit, loss of business, or any other special, indirect, or consequential damages, or the failure of any warranty, express or implied, arising out of or in connection with the use of this template. The NCCN does not warrant that the absence or exclusion of any representation concerning the care or the results of the care of the patient. The NCCN does not assume any responsibility for any damages, including, without limitation, losses of data, loss of income or profit, loss of business, or any other special, direct, indirect, incidental, punitive, or consequential damages arising out of or in connection with the use of this template, including, without limitation, losses of data, loss of income or profit, loss of business, or any other special, indirect, or consequential damages, or the failure of any warranty, express or implied, arising out of or in connection with the use of this template.
Using the Templates

Chemotherapy

National Comprehensive Cancer Network®

Chemotherapy Order Template™

Breast Cancer

AC (DOXorubicin/Cyclophosphamide) Every 21 Days
→Docetaxel Every 21 Days + Trastuzumab

AC (DOXorubicin/Cyclophosphamide) Every 21 Days Course

INDICATION:
Adjunct

REFERENCES:
1. NCCN Clinical Practice Guidelines in Oncology

NCCN SUPPORTIVE CARE:
1. Emetic Risk: Day 1- High
2. Fever neutropenia Risk: Intermediate

CHEMOTHERAPY REGIMEN
3-day cycle for 4 cycles

- DOXorubicin 52 mg/m² IV Push or Day 1
- See Safety Parameters and Capital Instructions for Information on slow IV Push administration.
- Cyclophosphamide 600 mg/m² IV over 24 minutes or Day 1
- Oral hydration is strongly encouraged with cyclophosphamide. Poorly hydrated patients may need supplemental IV hydration. Patients should receive meticulous care and hydration of 4–6 L/day on Day of Chemotherapy.

See Other Supportive Therapy for example of recommended hydration.

This course is 4 cycles of AC (DOXorubicin and cyclophosphamide) every 21 days.
DOCetaxel Every 21 Days and Trastuzumab course is included following completion of this course.

Please see Order Template BRRZB for DOCetaxel Every 21 Days and Trastuzumab course.

Supportive Care

(information therapy / See www.nccn.org/practitioners/physician_dos/PDFs/hematology.pdf)

Days 1-4
- Symptomatic 125 mg PO or fosfomycin 114 mg IV Day 1, ampicillin 66 mg PO Days 2–3
- Dexamethasone 12 mg PO/IV Days 1–4
- 0.75 mg/m²/day (recommended on days of highly emetogenic chemotherapy administration)
- Fentanyl 0.25 mg PO Day 5
- OR
- Dolaseton 100 mg PO or 1.5 mg/m² IV on Day 5
- OR
- Granisetron 2 mg PO daily or 1 mg PO BID or 3.0 mg/m² IV maximum 1 mg IV daily Day 1 or transdermal patch containing 24–48 hours prior to first dose of chemotherapy (patch supplied 6 days of therapeutic drug starting 24 hours after application)
- OR
- Granisetron 11–24 mg PO or 6–12 mg maximum 32 mg/m² IV day 1
- OR
- a Luraspace 0.5–2 mg PO/m or sublingual every 4 to every 6 hours as needed Days 1–4
- a H1 blocker or proton pump inhibitor

Template continued on page 2

This template is a practice-recommended statement of the consensus of its authors derived from the NCCN Clinical Practice Guidelines in Oncology® regarding the care of patients for whom the authors have identified with appropriate treatment. This document is intended for educational purposes only. It does not necessarily represent the views of all members of the NCCN. The NCCN does not recommend the medical use of this or any other tools. The user is advised to use only those tools that are consistent with the views of the NCCN. The NCCN does not recommend the use of this or any other tool. For any questions regarding the use of the tools, contact your physician.
Using the Templates

Antiemetics

This template is approved as a statement of the consensus of its authors. The use of this template in any way or by anyone is at the sole discretion of the user. The NCCN does not warrant the accuracy, as an original or in summation, of this material. This template is intended for use only as a guideline for the management of cancer patients. Refer to the NCCN Guidelines for further information.
Using the Templates

Growth factors

[Image of a template for chemotherapy orders, including details on AC (DOXorubicin/Cyclophosphamide) every 21 days and DOCEtaxel every 21 days + Trastuzumab.]

NCCN Comprehensive Cancer Network

Chemotherapy Order Template

Breast Cancer

AC (DOXorubicin/Cyclophosphamide) Every 21 Days → DOCEtaxel Every 21 Days + Trastuzumab

AC (DOXorubicin/Cyclophosphamide) Every 21 Days Course

Monitoring and Follow Parameters

- CBC with differential should be assessed routinely for potential dose evaluation.
- For DOXorubicin:
  - DOXorubicin is an anthracycline. Cumulative anthracycline dosage should be monitored.
  - Ejection fraction should be assessed prior to initiation of treatment and as clinically indicated.
  - Liver function should be assessed prior to each cycle for potential dose evaluation.
- For Cyclophosphamide, renal function should be assessed prior to each cycle for potential dose evaluation.

Safety Parameters and Special Instructions

- For DOXorubicin:
  - DOXorubicin is a vesicant.
  - This agent is administered IV Push. The preferred IV Push method for a vesicant is administration through the site port of a壶ity hosing. Alternatively, the drug can be administered via IV piglets.
  - For accreditation and compliance Refer to Assemble for specific information regarding associated drug interactions.
Using the Templates

Monitoring and hold parameters
Using the Templates

Safety issues
Clinical Recommendations

NCCN Chemotherapy Order Templates™

Breast Cancer - Invasive

- Neadjuvant
  - PACLItaxel 021D + Trastuzumab + sequential FEC
    (Fluorouracil/Fludarabine/IV Cyclophosphamide) + Trastuzumab - FEC +
    Trastuzumab course
  - PACLItaxel 021D + Trastuzumab + sequential FEC
    (Fluorouracil/Fludarabine/IV Cyclophosphamide) + Trastuzumab -
    PACLItaxel + Trastuzumab course

- Adjuvant
  - AC (DOXorubicin/Cyclophosphamide) 021D + sequential DOCEtaxel
    021D + Trastuzumab - DOCEtaxel + Trastuzumab course
  - AC (DOXorubicin/Cyclophosphamide) 021D + sequential PACLtaxel
    021D + AC course
  - AC (DOXorubicin/Cyclophosphamide) 021D + sequential DOCEtaxel
    021D + Trastuzumab course
Second Course

Chemotherapy Order Template™
Breast Cancer
AC (DOXOrubicin/Cyclophosphamide) Every 21 Days
- DOCEtaxel Every 21 Days + Trastuzumab

DOCEtaxel Every 21 Days + Trastuzumab
Course

INDICATION:
Adjuvant

REFERENCES:
3. ZECI27E4 -

NCCN SUPPORTIVE CARE:
1. Herceptin: Day 1: Low. Trastuzumab: Minimal
2. Febrile Neutropenia: Risk: Intermediate

CHEMOTHERAPY REGIMEN
21-day cycle for 4 cycles
- Doxorubicin 100mg/m² IV over 30 minutes on Day 1
- Paclitaxel 175mg/m² IV over 30 minutes on Day 1 of Week 1 followed by
- Trastuzumab 4 mg/kg IV over 30 minutes on Day 1 of Week 1 followed by
- Paclitaxel 80mg/m² IV over 30 minutes on Day 2 of Week 1 or 3 days
- Trastuzumab 4 mg/kg IV every 21 days beginning with Week 2
- Paclitaxel 80mg/m² IV over 30 minutes on Day 2 of Week 2 every 21 days beginning Week 3

This course is a course of DOCEtaxel Every 21 Days and 12 weeks of Trastuzumab
This course is initiated following completion of the AC (DOXOrubicin/Cyclophosphamide) Every 21 Days course. Please see Order Template BR327E for AC (DOXOrubicin/Cyclophosphamide) Every 21 Days course.

SUPPORTIVE CARE
- Prophylaxis
- DOCEtaxel requires premedication with dexamethasone for fluid retention. One recommended dosing strategy is:
- Dexamethasone 8 mg PO BID for three consecutive days starting 1 day prior to DOCEtaxel administration.

Template continued on page 2

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Second Course

National Comprehensive Cancer Network®

Chemotherapy Order Template™

Breast Cancer
AC (DOXorubicin/Cyclophosphamide) Every 21 Days
DOCEtaxel Every 21 Days + Trastuzumab

DOCEtaxel Every 21 Days + Trastuzumab
Course

Antiemetic regimen (see www.nccn.org/professionals/physician/guidelines.pdf for reference)

Day 1
No additional dexamethasone needed on Day 1 if dexamethasone already given for fluid retention.

- Dexamethasone 12 mg PO IV Day 1
- Phenytoin 10 mg PO IV every 4 or every 6 hours Day 1
- Metoclopramide 10 – 20 mg PO IV every 8 or every 6 hours Day 1
- Aminolevulinic acid 0.5 – 2 mg PO IV every 4 or every 6 hours as needed Day 1
- Any H2 blocker or proton pump inhibitor

PINN for breakthrough: Patients should be given at least one medication in a different category than that given above to have as needed for breakthrough. Please consult the NCCN Clinical Practice Guidelines in Oncology™ Antiemetics for appropriate antiemetic therapy.

Days of trastuzumab

PINN for breakthrough: Although this is a minimally emetic chemotherapy regimen, all patients should be provided with antiemetic therapy for breakthrough emesis. Please consult the NCCN Clinical Practice Guidelines in Oncology™ Antiemetics for appropriate antiemetic therapy.

Muscle growth factor factors (see www.nccn.org/professionals/physician/guidelines.pdf for reference)

CISPs are generally not recommended as primary prophylaxis based on risk of chemotherapy regimen. For more information on management of PIV, refer to NCCN Clinical Practice Guidelines in Oncology™ Hematologic Malignancies and Proton Therapy: In Cancer Care.

Monitoring and Follow-Up Parameters

- CBC with differential should be assessed routinely for potential dose reductions.

- For DOCEtaxel:
  - Liver function should be assessed prior to each cycle for potential dose evaluation.
  - Hypersensitivity reaction may occur with infusion. Monitor for and treat hypersensitivity reactions per institutional standard.
  - Signs and symptoms of neurotoxicity should be assessed prior to each cycle. Modifications of chemotherapy may be warranted.
  - neurotoxicity may occur. Patient should be assessed monthly for signs and symptoms.

- For trastuzumab:
  - Hypersensitivity reaction may occur with infusion. Monitor for and treat hypersensitivity reactions per institutional standard.
  - Ejection fraction should be assessed prior to initiation of treatment and as clinically indicated.

Template continued on page 3

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Second Course

Chemotherapy Order Template™
Breast Cancer
AC (DOXOrubicin/Cyclophosphamide) Every 21 Days
DOCEtaxel Every 21 Days + Trastuzumab

DOCEtaxel Every 21 Days + Trastuzumab
Course

SAFETY PARAMETERS AND SPECIAL INSTRUCTIONS

- For DOXOrubicin:
  - DOXOrubicin is an Infant:
  - This agent should be prepared either in glass or non-PVC containers and administered through non-PVC line.
NCCN.com

- Cancer information for the patient and caregiver
- Summaries of treatment guidelines for patients
- Information about living with cancer
- Tool for facilitating communication between patients and clinicians
- Links to our member institutions
Coming Soon

Patient Medication Instructions

• Information about drugs and biologics
• How they are given
• What toxicities to expect
• When to call a health care professional