# BCCA Protocol Summary for Palliative Therapy for Metastatic Breast Cancer using Gemcitabine and DOCEtaxel

***Protocol Code:*** *BRAVGEMD*

***Tumour Group:*** *Breast*

***Contact Physician:*** *Dr. Stephen Chia*

**ELIGIBILITY**:
- Progressive breast cancer after adjuvant anthracycline-based chemotherapy.
- Second or third line treatment of metastatic breast cancer after previous chemotherapy with an anthracycline in a patient who has an ECOG status of less than or equal to 2 and a life expectancy greater than three months.
- First line therapy for symptomatic metastatic breast cancer in a patient for whom anthracyclines are contraindicated and who has an ECOG status of less than or equal to 2 and a life expectancy greater than three months.
- To continue after 6 cycles, a BCCA "Compassionate Access Program" request must be approved.

**TESTS**:
- Baseline: CBC & diff, platelets, bilirubin, liver enzymes, creatinine
- Before each treatment: CBC & diff, platelets
- Before Cycle 4 and anytime if clinically indicated*: liver enzymes
  *See Precaution #7 for guidelines regarding hepatic dysfunction
- If clinically indicated at anytime: creatinine, bilirubin, liver enzymes

**PREMEDICATIONS**:
- dexamethasone 8 mg PO bid for 3 days, starting one day prior to each DOCEtaxel administration. Patient must receive minimum of 3 doses pre-treatment
- Additional prophylactic anti-emetics not usually required.
- DOCEtaxel-induced onycholysis and cutaneous toxicity of the hands may be prevented by wearing frozen gloves starting 15 minutes before DOCEtaxel infusion until 15 minutes after end of DOCEtaxel infusion; gloves should be changed after 45 minutes of wearing to ensure they remain cold during the entire DOCEtaxel infusion.

**TREATMENT**:

| Drug | Dose | BCCA Administration Guideline |
|---|---|---|
| DOCEtaxel | 75 mg/m$^2$ on day 1 only | IV in 100 to 500 mL* NS over 1 hour (use non-DEHP equipment) |
| gemcitabine | 1000 mg/m$^2$ on day 1 and 8 | IV in 250 mL NS over 30 minutes |

*use 100 mL for doses less than or equal to 74 mg, use 250 mL for doses 75 to 185 mg, use 500 mL for doses greater than 185 mg

- Repeat every 21 days x 6 cycles. If continued response can apply for further cycles but requires a BCCA "Compassionate Access Program" request approval.

**DOSE MODIFICATIONS**:

## 1. Hematological

### Day 1 Counts

| **ANC (x $10^9$/L)** | | **Platelets (x $10^9$/L)** | **Percent of previous cycle day 1 DOCEtaxel and gemcitabine dose** |
|---|---|---|---|
| greater than or equal to 1.5 | and | greater than or equal to 100 | 100% |
| less than 1.5 | or | less than100 | Delay 1 week |
| • Grade 4 febrile neutropenia with previous cycle<br>• greater than 2 week delay of the start of next cycle due to toxicity | | | 75% |

### Day 8 Counts

| **ANC (x $10^9$/L)** | | **Platelets (x $10^9$/L)** | **Percent of Day 1 gemcitabine Dose** |
|---|---|---|---|
| greater than or equal to 1.2 | and | greater than 75 | 100% |
| 1 to 1.19 | or | 50 to 75 | 75% |
| 0.7 to .99 | and | greater than or equal to 50 | 50% |
| less than 0.7 | or | less than 50 | Hold and reassess on Day 1 next cycle |

## 2. Non-hematologic toxicity (except fatigue, neurotoxicity, hepatotoxicity)

| **NCIC Grade** | **Percent of previous cycle day 1 DOCEtaxel and gemcitabine dose** |
|---|---|
| 0 to 2<br><br>(except nausea and vomiting or alopecia) | 100% |
| 3<br><br>(except nausea and vomiting or alopecia) | 75% or hold<br><br>(at discretion of treating physician) |
| 4 | 50% or hold<br><br>(at discretion of treating physician) |

### 3. Grade 3 Fatigue

| | Percent of previous cycle day 1 DOCEtaxel dose |
|---|---|
| First occurrence | 75% |
| If persistent on 75% | 50% |
| If persistent on 50% | Hold therapy until symptoms less than or equal to grade 1 toxicity. Discontinue DOCEtaxel therapy if symptoms do not resolve within 6 weeks. |

### 4. (i) Grade 2 Neurotoxicity

| | Percent of previous cycle day 1 DOCEtaxel dose |
|---|---|
| First occurrence | 75% |
| If persistent on 75% | 50% |
| If persistent on 50% | Hold therapy until symptoms less than or equal to grade 1 toxicity. Discontinue DOCEtaxel therapy if symptoms do not resolve within 6 weeks. |

### (ii) Grade 3 Neurotoxicity

| | Percent of previous cycle day 1 DOCEtaxel dose |
|---|---|
| Any occurrence | Hold DOCEtaxel therapy until symptoms less than or equal to grade 1 toxicity. Discontinue DOCEtaxel therapy if symptoms do not resolve within 6 weeks. |
| Recovery to grade less than or equal to 1 | Reinstitute at 50%<br><br>(Physician can escalate dose at their discretion) |
| No Recovery to grade less than or equal to 1 | Discontinue DOCEtaxel |

### 5. Hepatic Dysfunction

| Alkaline Phosphatase | | AST +/or ALT | DOCEtaxel Dose |
|---|---|---|---|
| less than 2.5 x ULN | and | less than or equal to 1.5 x ULN | 100% |
| 2.5 to 5 x ULN | and | 1.6 to 5 x ULN | 75% |
| greater than 5 x ULN | or | greater than 5 ULN | discuss with contact physician |

ULN = upper limit of normal

## PRECAUTIONS:

1. **Renal Dysfunction**: Irreversible renal failure associated with hemolytic uremic syndrome may occur (rare). Use caution with pre-existing renal dysfunction.
2. **Pulmonary Toxicity**: Acute shortness of breath may occur. Discontinue treatment if drug-induced pneumonitis is suspected.

3. **DOCEtaxel Hypersensitivity**: Reactions are common but it is not necessary to routinely initiate the infusion slowly. If slow initiation of infusion is needed, start infusion at 30 mL/h x 5 minutes, then 60 mL/h x 5 minutes, then 120 mL/h x 5 minutes, then complete infusion at 250 mL/h (for 500 mL bag, continue 250 mL/h for 5 minutes and then complete infusion at 500 mL/h). Refer to BCCA Hypersensitivity Guidelines
4. **Fluid retention**: Dexamethasone premedication must be given to reduce incidence and severity of fluid retention.
5. **Neutropenia**: Fever or other evidence of infection must be assessed promptly and treated aggressively.
6. **Extravasation**: DOCEtaxel causes pain and tissue necrosis if extravasated. Refer to BCCA Extravasation Guidelines.
7. **Hepatic Dysfunction**: DOCEtaxel undergoes hepatic metabolism. Hepatic dysfunction (particularly elevated AST) may lead to increased toxicity and usually requires a dose reduction. Baseline liver enzymes are recommended before cycle 1 and then if clinically indicated (eg, repeat liver enzymes prior to each treatment if liver enzymes are elevated, liver metastases are present or there is severe toxicity such as neutropenia). If liver enzymes are normal and there is no evidence of liver metastases or severe toxicity, check liver enzymes after 3 cycles (ie, at cycle 4). Note: this information is intended to provide guidance but physicians must use their clinical judgment when making decisions regarding monitoring and dose adjustments.
8. **Possible interaction with warfarin has** been reported and may occur at any time. Close monitoring is recommended (monitor INR weekly during gemcitabine therapy and for 1 to 2 months after discontinuing gemcitabine treatment).

**Call Dr. Stephen Chia or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.**

Date activated: 1 Jul 2006

Date revised: 1 Jul 2017 (Drug interaction with warfarin updated)