

BC Cancer Protocol Summary for Palliative Therapy for Metastatic Breast Cancer using Weekly DOXOrubicin

Protocol Code: BRAVA7
Tumour Group: Breast
Contact Physician: Dr. Sophie Sun

ELIGIBILITY:

- Palliative treatment for patients with advanced breast cancer who
 - Have not exceeded a cumulative DOXOrubicin dose of 360 mg/m², or in whom the risk: benefit ratio of further anthracycline is a reduced consideration, due to lack of other available therapy options
 - Have hyperbilirubinemia or severe hepatic dysfunction
 - Have bone marrow dysfunction with neutropenia and/or thrombocytopenia
 - are not suitable for combination chemotherapy
- ECOG performance status 0-2
- expected survival greater than 3 months

EXCLUSIONS:

- Clinically significant cardiac disease (history of symptomatic ventricular arrhythmias, congestive heart failure or myocardial infarction within previous 12 months)

TESTS:

- Baseline: CBC & diff, total bilirubin, [GGT, ALT, LDH, alkaline phosphatase](#)
- Before each treatment: CBC & diff
- If clinically indicated: bilirubin, [GGT, ALT, LDH, alkaline phosphatase](#), creatinine, ECHO or MUGA scan

PREMEDICATIONS:

- Antiemetic protocol for moderately emetogenic chemotherapy (see protocol SCNAUSEA)

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
DOXOrubicin	20 mg/m ² on Day 1, 8 and 15	IV push

- For frail or heavily pre-treated patients, start with **15 mg/m²**

- Repeat every 7 days x 3 weeks = 1 cycle for a total of 6 or 8 cycles to keep cumulative dose DOXOrubicin less than or equal to 360 mg/m², if clinically appropriate
- If radiation therapy is required, it is given following completion of chemotherapy (BC Cancer Management Manual).

DOSE MODIFICATIONS:

1. Hematological:

ANC (x 10 ⁹ /L)	Platelets (x 10 ⁹ /L)	Dose
greater than or equal to 1.5	greater than or equal to 90	100%
1.0 to less than 1.5	70 to less than 90	75%
less than 1.0	less than 70	delay

2. Hepatic dysfunction:

ALT/AST		Bilirubin (micromol/L)	Dose
2-3 x ULN		-	75%
greater than 3 x ULN	or	20 to 51	50%
-		51 to 85	25%
-		greater than 85	Do not administer

PRECAUTIONS:

1. **Cardiac Toxicity:** DOXOrubicin is cardiotoxic and must be used with caution, if at all, in patients with severe hypertension or cardiac dysfunction. Cardiac assessment recommended if lifelong dose of 400 mg/m² to be exceeded (see BC Cancer Drug Manual). Consider dexrazoxane +/- alternate therapy plan, if prolonged therapy beyond the usual parameters is under consideration, due to clinical need. Discuss plan with medical oncologist, if appropriate.
2. **Extravasation:** DOXOrubicin causes pain and tissue necrosis if extravasated. Refer to BC Cancer Extravasation Guidelines.
3. **Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively.
4. **Drug Interactions:** DOXOrubicin is a major CYP2D6 substrate therefore drugs that are CYP2D6 inhibitors (e.g., chlorpromazine, paroxetine, quinine) could potentially increase the pharmacological effects of DOXOrubicin. DOXOrubicin is a major

CYP3A4 substrate therefore drugs that are CYP3A4 inducers (e.g., carbamazepine, phenytoin, St John's wort) could potentially decrease the pharmacological effects of DOXOrubicin. CYP3A4 inhibitors (e.g., diclofenac, imatinib, verapamil) could potentially increase the pharmacological effects of DOXOrubicin. DOXOrubicin is a moderate CYP2B6 inhibitor therefore could potentially increase the pharmacological effects of drugs that are CYP2B6 substrates (e.g., promethazine, propofol, selegiline). DOXOrubicin is also a weak CYP2D6 inhibitor and a weak CYP3A4 inhibitor.

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

References:

1. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Breast cancer (V.2.2007). 28 March 2007. Available from www.nccn.org. Accessed 1 July, 2007.
2. Doxorubicin. In: de Lemos ML, editor. BC Cancer Agency Cancer Drug Manual. Vancouver, British Columbia: BC Cancer Agency. Available from <http://www.bccancer.bc.ca>. Accessed 1 December, 2007.