Systemic Anti Cancer Treatment Protocol

Doxorubicin Weekly
Advanced Breast Cancer

PROTOCOL REF: MPHADOWEBR
(Version No: 1.0)

Approved for use in:

Locally advanced and/or metastatic breast cancer

Dosage:

Drug	Dosage	Route	Frequency
Doxorubicin	20mg/m^2	IV	Every 7 days

Repeat weekly whilst clinically effective.

At 18 weeks review clinically and ensure maximum cumulative dose not reached.

Continue if ongoing benefit from treatment.

Supportive treatments:

Anti-emetic risk - Moderate

Dexamethasone 4mg oral, twice a day for 3 days

Domperidone 10mg oral tablets, up to 3 times a day or as required

Extravasation risk:

Vesicant – follow trust / network extravasation policy, specific treatment may apply

Administration:

Day	Drug	Dosage	Route	Diluent and Rate
1	Dexamethasone 30 minutes before chemotherapy	8mg	PO	
1	Ondansetron 30 minutes before chemotherapy	16mg	PO	
1	**Doxorubicin**	**20mg/m^2**	IV	IV bolus over 10 to 15 minutes Concurrent administration, doxorubicin at 400mL/hr and sodium chloride 0.9% at 100mL/hr

Notes:

Maximum cumulative dose of doxorubicin: 450 to 550mg/m^2 Ensure all adjuvant treatment is included and any treatment for other tumours e.g. previous lymphoma

Perform baseline ejection function assessment (ECHO or MUGA) if patient is considered at risk of significantly impaired cardiac contractility.

Use alternative regimen if cardiac ejection fraction < 50%

Main Toxicities:

Haematological	Neutropenia, anaemia, thrombocytopenia,
Cardiac and Vascular disorders	Cardiomyopathy, arrhythmias
Gastrointestinal	Nausea, vomiting, diarrhoea, constipation, mucositis
Hepatobiliary	Elevation of liver transaminases, alkaline phosphatase and bilirubin.
Skin and subcutaneous tissue disorders	Alopecia Phlebitis
General disorders and administration site conditions	Fatigue Infertility, early menopause

Investigations and treatment plan:

	Pre	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Comments
Medical Assessment	X				X			Every 4 weeks
Nursing Assessment	X	X	X	X	X	X	X	Every cycle
MUGA*	X							If clinically indicated
FBC	X	X	X	X	X	X	X	Every cycle
U&E & LFT	X	X	X	X	X	X	X	Every cycle
CT scan	X							Every 8 weeks, repeat as clinically indicated
Informed Consent	X							
ECG	X							If clinically indicated
PS recorded	X	X	X	X	X	X	X	Every cycle
Toxicities documented	X	X	X	X	X	X	X	Every cycle
Weight recorded	X	X	X	X	X	X	X	Every cycle

Dose Modifications and Toxicity Management:

Haematological toxicity

Proceed on day 1 if all apply:-

ANC ≥ 1.0 x 10^9/L	Platelets ≥ 100 x 10^9/L

Delay 1 week on day 1 if any apply:-

ANC ≤ 0.9 x 10^9/L	Platelets ≤ 99 x 10^9/L

If bone marrow infiltration then these limits may be adjusted by the Consultant Oncologist

Non-haematological toxicity

<table>
<tr><td>Renal</td><td>No dose adjustments needed</td></tr>
<tr><td>Hepatic</td><td>
<table>
<tr><th>Bilirubin (µmol/L)</th><th>Doxorubicin dose</th></tr>
<tr><td>20 to 50</td><td>50%</td></tr>
<tr><td>51 to 85</td><td>25%</td></tr>
<tr><td>Above 85</td><td>omit</td></tr>
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</td></tr>
<tr><td>Cardiomyopathy</td><td>Perform baseline MUGA in any patient with suspected cardiac impairment. If cardiac ejection fraction < 50% discuss with consultant and consider an alternative regimen.
Consider a lower maximum cumulative doxorubicin dose of 400mg/m^2 for any patient with cardiac dysfunction or that has been exposed to mediastinal radiation
Note that cardiomyopathy may be delayed – if 20% reduction if LVEF after 300mg/m^2 then stop doxorubicin</td></tr>
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References:

Gundersen et al Eur J Cancer 1990 26(1):45-8

Gasparini et al Am J Clin Oncol 1991 14(1):38-44

Barni et al Tumori 1993 79(1):45-8