

EC

INDICATION (ICD10) C50

1. Metastatic breast cancer with no prior exposure to anthracyclines
2. Adjuvant with significant comorbidities
PS 0, 1, 2

REGIMEN

Day 1 CYCLOPHOSPHAMIDE 500mg/m² IV bolus
 EPIRUBICIN 75mg/m² IV bolus

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 21 days for 4 cycles
(up to 6 cycles for metastatic disease if patient tolerating and continuing to benefit)

ANTI-EMETICS

High risk day 1

CONCURRENT MEDICATION REQUIRED

GCSF	Adjuvant intent only. GCSF for 7 days starting at least 24 hours after chemotherapy
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EXTRAVASATION AND TYPE OF LINE / FILTERS

Cyclophosphamide - neutral
Epirubicin – vesicant

No filter required
Peripheral line <4 cycles, otherwise central line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10⁹/L ≥1.0
Platelets x 10⁹/L ≥100
Consider ECHO if patient has preexisting cardiac disease
Baseline weight and every cycle

MAIN TOXICITIES AND ADVERSE REACTIONS

Cyclophosphamide	may irritate bladder, drink copious volumes of water.
Epirubicin	Cardiotoxicity – monitor cardiac function. Epirubicin may be stopped in future cycles if signs of cardiotoxicity e.g. cardiac arrhythmias, pericardial effusion, tachycardia with fatigue.

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS (not exhaustive list check SPC/BNF/Stockleys)

Cyclophosphamide	<p>Cytochrome P450 enzyme inducers (e.g. rifampicin, carbamazepine, phenytoin, St Johns Wort, corticosteroids): may increase active cyclophosphamide metabolites.</p> <p>Allopurinol, Cimetidine and protease inhibitors: may increase active metabolites.</p> <p>Aprepitant, Ciprofloxacin, Fluconazole, Itraconazole: may reduce activation of cyclophosphamide and alter the effectiveness of treatment.</p> <p>Grapefruit juice: decreased or delayed activation of cyclophosphamide. Patients should be advised to avoid grapefruit juice for 48 hours before and on day of cyclophosphamide dose.</p>
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DOSE MODIFICATIONS

Epirubicin maximum lifetime dose

= 650mg/m² (in patients with cardiac dysfunction or exposed to mediastinal irradiation)

= 1000mg/m² (with normal cardiac function)

Hepatic impairment

Epirubicin

Bilirubin 24-51micromol/L	give 50% dose
Bilirubin 51-85micromol/L or AST >4xULN	give 25% dose
Bilirubin >86micromol/L or Child Pugh C	not recommended

Renal impairment

Cyclophosphamide

CrCl 10-29ml/min	Consider giving 75% dose
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REFERENCES

1. Coskan U, Gunel N, Onuk E et al. Effect of different neoadjuvant chemotherapy regimens on locally advanced breast cancer. Neoplasma 2003; 50 (3): 210-216
2. Fisher, B et al; JCO 1990; 8: 2483 – 2496
3. ABC Trial, UKCCCR, June 1993