EC DOCETAXEL

INDICATION (ICD10) C50

1. Neoadjuvant breast cancer and adjuvant node positive good performance status ≤65 years breast cancer. Consider use in >65 years only if extremely good performance status. PS 0, 1, 2

REGIMEN

Cycles 1 to 3

Day 1 EPIRUBICIN 100mg/m^2 IV bolus
CYCLOPHOSPHAMIDE 500mg/m^2 IV bolus

Cycles 4 to 6

Day 1 Premedication: Dexamethasone 8mg BD starting 24 hours before chemotherapy (or 20mg IV on day of chemotherapy) and 8mg bd post-chemotherapy for 2 days
DOCETAXEL 100mg/m^2 in 250ml* sodium chloride 0.9% infusion over 1 hour
* doses 200mg to 360mg in 500ml sodium chloride 0.9%

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 21 days for 6 cycles

ANTI-EMETICS

High risk day 1 cycles 1 to 3 (consider aprepitant)
Low risk day 1 cycles 4 to 6

CONCURRENT MEDICATION REQUIRED

Docetaxel	Ensure premedication given before docetaxel. This can reduce the incidence and severity of fluid retention as well as the severity of hypersensitivity reactions. Loperamide prn every docetaxel cycle
GCSF	GCSF for 7 days starting at least 24 hours after chemotherapy

EXTRAVASATION AND TYPE OF LINE / FILTERS

Cyclophosphamide – neutral
Docetaxel – exfoliant
Epirubicin – vesicant

Filter not required
Central (or peripheral) line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10^9/L ≥1.0 (0.8-1.0 on the day of chemo go ahead if on GCSF support)
Platelets x 10^9/L ≥100
Consider ECHO if patient has preexisting cardiac disease
Baseline weight and every cycle

MAIN TOXICITES 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.
Docetaxel	Cutaneous reactions, peripheral neuropathy or fluid retention, hypersensitivity reactions

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

Cyclophosphamide	Cytochrome P450 enzyme inducers (e.g. rifampicin, carbamazepine, phenytoin, St Johns Wort, corticosteroids): may increase active cyclophosphamide metabolites. Allopurinol, Cimetidine and protease inhibitors: may increase active metabolites. Aprepitant, Ciprofloxacin, Fluconazole, Itraconazole: may reduce activation of cyclophosphamide and alter the effectiveness of treatment. 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.

DOSE MODIFICATIONS
Epirubicin maximum lifetime dose
= 650mg/m^2 (in patients with cardiac dysfunction or exposed to mediastinal irradiation)
= 1000mg/m^2 (with normal cardiac function)

Haematological
Previous neutropenic sepsis, Symptoms including diarrhoea, mucositis and leucopenia, discuss with Registrar or Consultant

Docetaxel
Discuss dose reductions if severe cutaneous reactions, peripheral neuropathy or fluid retention after previous course.

Hepatic impairment
Docetaxel

ALT and/or AST >1.5xULN and ALP >2.5xULN	recommended SPC dose for 100mg/m^2 is give 75mg/m^2.
Bilirubin >ULN and ALT and AST >3.5xULN with ALP >6xULN	should not be used unless strictly indicated.

Epirubicin

Bilirubin 24-51micromol/L	give 50% dose
Bilirubin 52-85micromol/L or AST >4xULN	give 25% dose
Bilirubin >85micromol/L or Child Pugh C	not recommended

Renal impairment
Cyclophosphamide

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

REFERENCES

1. Effects of Chemotherapy and hormonal therapy for early breast cancer on recurrence and 15 year survival: an overview of the randomised trials. EBCTG. Lancet 2005; 365: 1687–1717
2. Martin, M et al; NEJM (2005); 352 (22): 2302–2313
3. Roche, H et al; JCO (2006); 24 (36) (PACS 01 trial)
4. Del Maestro, L et al; Lancet 2015; 385: 1863–1872 (no benefit for 5FU)