EC

First line option for advanced breast cancer with no prior exposure to anthracyclines
For adjuvant use in breast cancer

Drugs / Dosage:	Epirubicin	60 – 90* mg/m^2	IV	Day 1
	Cyclophosphamide	600mg/m^2	IV	Day 1

*In adjuvant setting, epirubicin dose is 90mg/m^2.
*In metastatic disease, the start dose is at the discretion of the consultant, with the 3 usual options being $E_{60}C$, $E_{75}C$ or $E_{90}C$.

Administration: Epirubicin via fast running infusion of 0.9% sodium chloride
Cyclophosphamide may be given as a bolus injection

Frequency: 3 weekly cycle
Adjuvant: 4 cycles
Metastatic: up to 6 cycles

Main Toxicities: myelosuppression; alopecia; mucositis; cardiomyopathy; haemorrhagic cystitis; ovarian failure / infertility

Anti- emetics: highly emetogenic

Extravasation: epirubicin is a vesicant

Regular Investigations:	FBC	Day 1
	LFTs	Day 1
	U&Es	Day 1
	CA 15-3	Cycle 1, 3 & 5 in advanced disease and **only** if elevated prior to treatment
	Echo/MUGA	see Comments

Comments: Maximum cumulative dose of epirubicin = 950mg/m^2

A baseline echo/MUGA scan should be performed where the patient is considered at risk of having impaired cardiac function e.g. significant cardiac history, hypertension, obese, smoker, elderly, previous exposure to anthracyclines, previous thoracic radiotherapy. Echo/MUGA should be repeated if there is suspicion of cardiac toxicity at any point during treatment, or if cumulative anthracycline dose approaches maximum

Offer scalp cooling

Dose Modifications

Haematological Toxicity: In adjuvant treatment, dose reduction and/or delays can compromise outcome.
After first delay due to neutropenia *or* incidence of neutropenic sepsis, secondary G-CSF prophylaxis (s/c once daily for 5 days, starting on Day 3) will be required with all subsequent cycles. If any further problems with delays, consider a longer course of G-CSF or a dose reduction, according to individual case. If in doubt, contact the relevant Consultant.

Reason for Update: clarification of start dose depending on stage	Approved by Consultant: Dr A Neal
Version: 6	Approved by Lead Chemotherapy Nurse: P Deery
Supersedes: Version 5	Date: 26.10.15
Prepared by: S Taylor	Checked by: C Tucker

In metastatic setting, G-CSF may only be used according to criteria specified in G-CSF policy. A dose reduction should be considered if myelosuppression results in more than one delay.

Neutrophils ≥ 1.5 x 10^9/l and Platelets > 100 x 10^9/l	Proceed with chemotherapy
Neutrophils 1.1 x 10^9/l - 1.4 x 10^9/l and Platelets > 100 x 10^9/l	Contact the Consultant (preferably) or Sp Registrar for his/her decision on whether to delay treatment as below, or to proceed.
Neutrophils ≤ 1.0 x 10^9/l Or Platelets ≤ 100 x 10^9/l	Delay for 1 week. Repeat FBC - if within normal parameters, resume treatment, including secondary G-CSF prophylaxis in the adjuvant setting as discussed above.

Renal Impairment:

CrCl (ml/min)	Cyclophosphamide Dose
> 20	Give 100%
10 – 20	Give 75%
< 10	Give 50%

Hepatic Impairment:

Bilirubin (µmol/l)	Epirubicin Dose
24 – 51	Give 50% dose
52 – 85	Give 25% dose
> 85	Omit

References:

Fisher, B et al; JCO 1990; 8: 2483 – 2496
ABC Trial, UKCCCR, June 1993