POMB/ACE

INDICATION (ICD10) C62

1. Metastatic germ cell. PS 0, 1, 2

REGIMEN

POMB

Day 1	VINCRISTINE	1mg/m^2 (maximum 2mg) in 50ml sodium chloride 0.9% IV infusion over 10 minutes
	METHOTREXATE	300mg/m^2 in 500ml sodium chloride 0.9% IV infusion over 12 hours
	Post hydration	
Day 2	BLEOMYCIN	30000units in 1000ml sodium chloride 0.9% IV infusion over 24 hours
Day 3	Prehydration	
	CISPLATIN	60mg/m^2 in 1000ml sodium chloride 0.9% IV infusion over 4 hours
	CISPLATIN	60mg/m^2 in 1000ml sodium chloride 0.9% IV infusion over 4 hours
	Post hydration	

ACE

Day 1	DACTINOMYCIN	500micrograms IV bolus
	ETOPOSIDE	100mg/m^2 in 1000ml* sodium chloride 0.9% IV infusion over 1 hour
Day 2	DACTINOMYCIN	500micrograms IV bolus
	ETOPOSIDE	100mg/m^2 in 1000ml* sodium chloride 0.9% IV infusion over 1 hours
Day 3	DACTINOMYCIN	500micrograms IV bolus
	CYCLOPHOSPHAMIDE	500mg/m^2 IV bolus
	ETOPOSIDE	100mg/m^2 in 1000ml* sodium chloride 0.9% IV infusion over 1 hour

*etoposide doses 48mg to 88mg in 250ml, doses 96mg to 180mg in 500ml sodium chloride 0.9%

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 14 days

Regimen sequence: POMB POMB ACE POMB ACE POMB ACE

ANTI-EMETICS

Moderate emetic risk POMB day 1

Minimal emetic risk POMB day 2

High emetic risk POMB day 3

Moderate emetic risk ACE days 1 to 3

CONCURRENT MEDICATION REQUIRED

Bleomycin	Ensure hydrocortisone administered before bleomycin IM
Cisplatin	Ensure adequate pre and post hydration. If urine output is <100ml/hour or if patient gains >2kg in weight during IV administration post cisplatin give 20-40mg furosemide PO/IV.
Methotrexate	1000ml sodium chloride 0.9% + 20mmol KCl over 4 hours post hydration Calcium folinate (calcium leucovorin (15mg) PO every 6 hours for 6 doses starting 24 hours after methotrexate.
GCSF	Consider GCSF starting day 4 after POMB cycles

EXTRAVASATION AND TYPE OF LINE / FILTERS

Bleomycin – neutral
Cisplatin – exfoliant
Cyclophosphamide - neutral
Dactinomycin - vesicant
Etoposide – irritant
Methotrexate - inflammitant

Peripheral or central line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10^9/L ≥1.0
Platelets x 10^9/L ≥100
Ideally EDTA GFR should be used
Creatinine clearance (GFR) calculated, at the Consultants discretion
Serum creatinine - each cycle
Pulmonary function tests (including transfer factor) before cycle 1
Baseline weight and every cycle

MAIN TOXICITES AND ADVERSE REACTIONS

Bleomycin	If breathlessness or infiltrates appear not attributable to tumour or co-existence of lung disease bleomycin must be stopped immediately. Consider treatment with corticosteroids and a broad spectrum antibiotic and / referral to chest team. Investigation of choice high resolution CT chest.
Cisplatin	Nephrotoxicity – ensure adequate pre and post hydration is prescribed. Ototoxicity – assess patient for tinnitus or hearing abnormalities.
Cyclophosphamide	May irritate bladder, drink copious volumes of water.
Methotrexate	Methotrexate induced mucositis - folinic acid (calcium folinate) rescue Caution with pleural effusions or ascites

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS

(not exhaustive list check SPC/BNF/Stockleys)

Bleomycin	Cisplatin increases the risk of pulmonary toxicity.
Cisplatin	Aminoglycosides increased risk of nephrotoxicity and ototoxicity. Renal function should be well monitored and audiometric tests as required. Cisplatin can cause a decrease in phenytoin serum levels. This may lead to reappearance of seizures and may require an increase of phenytoin dosages.
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.
Methotrexate	NSAIDs, antibiotics: may reduce renal excretion

DOSE MODIFICATIONS

Platelets <50x10^9/L consider switching IM bleomycin to 50-100ml sodium chloride 0.9% IV infusion over 30 minutes

Non-haematological

If patient complains of tinnitus, tingling of fingers and/or toes, discuss with SpR or Consultant before administration.

Hepatic impairment

Dactinomycin

Consider dose reduction in severe hepatic disease.

Etoposide

Bilirubin ≥50micromol/L or decreased albumin	give 50% dose

Methotrexate

Bilirubin >85micromol/L	omit

Renal impairment

Bleomycin

CrCl >50ml/min	give 100% dose
CrCl 10-50ml/min	give 75% dose
CrCl <10ml/min	give 50% dose

Cisplatin

CrCl >60ml/min	give 100% dose
CrCl 45-60ml/min	give 75% dose
CrCl <45ml/min	not recommended

Cyclophosphamide

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

Etoposide

CrCl >50ml/min	give 100% dose
CrCl 15-50ml/min	give 75% dose
CrCl <15ml/min	Further dose reduction

Methotrexate

CrCl 20-50 mL/min	give 50% dose
CrCl <20mL/min	omit dose

REFERENCES