

## PEMETREXED CARBOPLATIN

### INDICATION (ICD10) C34

1. Palliative treatment of non-resectable malignant mesothelioma in patient with an ECOG performance status of 0-1. (TA135) (unlicensed)
2. First-line treatment of patients with locally advanced or metastatic non-small-cell lung cancer (NSCLC) only if the histology of the tumour has been confirmed as adenocarcinoma or large-cell carcinoma. PS 0, 1 or 2 (TA181) (unlicensed)

### REGIMEN

#### Carboplatin to start 30 minutes after completing pemetrexed

Day 1 Pre-medication: Dexamethasone 4mg bd for 3 days (starting the day before chemotherapy)

PEMETREXED 500mg/m<sup>2</sup> in #ml IV infusion over 10 minutes

CARBOPLATIN AUC 5 in #ml glucose 5% IV infusion over 30 minutes

Dose calculated by EDTA GFR or calculated CrCl + 25 x AUC.

(Maximum dose when using CrCl 125+25 x AUC)

# diluent volume for dose prescribed as per national standardised product specification or licensed dose

### CYCLE FREQUENCY AND NUMBER OF CYCLES

Mesothelioma - every 21 days up to 6 cycles

NSCLC - every 21 days 3 to 6 cycles

### ANTI-EMETICS

Moderate risk day 1

### CONCURRENT MEDICATION REQUIRED

Carboplatin	Anaphylaxis treatment should be prescribed if the patient has had an anaphylactic episode previously. Dexamethasone 20mg IV bolus Chlorphenamine 10mg IV bolus Carboplatin should be given at a slower rate e.g. 2-4 hours.
Pemetrexed	Ensure premedication taken Dexamethasone 4mg bd for 3 days (starting the day before chemotherapy) Folic acid 400mcg/day orally starting 1 to 3 weeks before chemotherapy continuing until 21 days after the last dose of pemetrexed. Hydroxycobalamin 1000mcg IM every 9 weeks starting 1 to 3 weeks before chemotherapy (give with every 3rd cycle of chemotherapy)

### EXTRAVASATION AND TYPE OF LINE / FILTERS

Carboplatin - irritant

Pemetrexed - inflammatory

Peripheral line

## INVESTIGATIONS

Blood results required before SACT administration

FBC, U&E and LFTs every cycle

Neutrophils x 10<sup>9</sup>/L ≥1.5

Platelets x 10<sup>9</sup>/L ≥100

GFR assessed using EDTA result or calculated creatinine clearance at the Consultant's discretion.

Patients with hydronephrosis or serum creatinine ≥100micromol/L need a serum creatinine checked every cycle.

Baseline weight and every cycle

## MAIN TOXICITIES AND ADVERSE REACTIONS

Carboplatin	Ototoxicity – monitor Neurotoxicity - monitor
Pemetrexed	Skin reactions Pneumonitis

## INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS

(not exhaustive list check SPC/BNF/Stockleys)

Pemetrexed	Aminoglycosides – increased risk of nephrotoxicity and ototoxicity NSAIDs Avoid all for at least 5 days prior to and 2 days after pemetrexed dose.
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## DOSE MODIFICATIONS

### Haematological

Pemetrexed

Delay treatment until resolution then treat with appropriate dose modification.

Nadir neutrophils <0.5 and nadir platelets >50 75% of previous dose

Nadir platelets ≤50 regardless of nadir neutrophils 50% of previous dose

Treatment with pemetrexed should be discontinued if a patient experiences any haematologic or non-haematologic grade 3 or 4 toxicity after 2 dose reductions

### Non-haematological

Pemetrexed

Any grade 3 or 4 non-haematological toxicities except mucositis	Give 75% of previous dose
Any diarrhoea requiring hospitalisation (irrespective of grade) or grade 3 or 4 diarrhoea	Give 75% of previous dose
Grade 3 or 4 mucositis	Give 50% of previous dose
Neurotoxicity grade 3 or 4	Discontinue therapy
If a patient experiences any haematological or non-haematological grade 3 or 4 toxicity after 2 dose reductions or immediately if grade 3 or 4 neurotoxicity is observed.	Discontinue therapy

### Hepatic impairment

Pemetrexed

Total bilirubin should be ≤1.5xULN.

Alk phos, AST and ALT ≤3xULN. (Alk phos, AST, and ALT ≤5x normal is acceptable if liver has tumour involvement). Clinical decision

## Renal impairment

### Carboplatin

GFR / calculated CrCl $\leq$ 20ml/min or $\leq$ 30ml/min with pre-existing severe renal impairment	Contraindicated
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### Pemetrexed

CrCl $\leq$ 45ml/min	Not recommended
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## REFERENCES

1. Vogelzang, N et al; JCO (2003); 21 (14): 2636–2644
2. Hughes, A et al; JCO (2002); 20 (16): 3533–3544
3. Scagliotti, GV et al; JCO 2008; 26 (21): 3543–3551 (NSCLC)