Chemotherapy Protocol

LUNG CANCER – NON-SMALL CELL (NSCLC)

CARBOPLATIN (AUC6) 4 CYCLES

Regimen

- NSCLC – Carboplatin (AUC6) 4 Cycles

Indication

- Second line therapy of stage III or IV NSCLC
- WHO Performance status 0, 1
- Palliative intent

Toxicity

Drug	Adverse Effect
Carboplatin	Neuropathy, thrombocytopenia

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

Monitoring

Disease

- A baseline chest x-ray should be performed before starting treatment and up to date (ideally within 1 month) cross section imaging should also be performed

Regimen

- EDTA or calculated creatinine clearance before the first cycle
- FBC, LFTs and U&Es prior to each cycle
- A chest x-ray should be performed before each cycle

Dose Modifications

The dose modifications listed are for haematological, liver and renal function only. Dose adjustments may be necessary for other toxicities as well.

In principle all dose reductions due to adverse drug reactions should not be re-escalated in subsequent cycles without consultant approval. It is also a general rule

for chemotherapy that if a third dose reduction is necessary treatment should be stopped.

Please discuss all dose reductions / delays with the relevant consultant before prescribing, if appropriate. The approach may be different depending on the clinical circumstances. The following is a general guide only.

Haematology

Prior to prescribing the following criteria must be met;

Prior to prescribing cycle one the following treatment criteria must be met;

Criteria	Eligible Level
Neutrophil	Greater than or equal to $1.5x10^9$/L (unless due to bone marrow impairment)
Platelets	Greater than or equal to $100x10^9$/L (unless due to bone marrow impairment

Consider blood transfusion or the use of erythropoietin according to NICE TA323 if patient symptomatic of anaemia or has haemoglobin of less than 8g/dL (80g/L)

Subsequently if the neutrophils are less than $1.5x10^9$/L, in the first instance delay treatment for 7 days. If counts recover at this point continue at the initial dose. If counts remain low continue with treatment using a 20% dose reduction. If the myelosuppression recurs despite this dose reduction stop treatment.

If the platelets are less than $100x10^9$/L, in the first instance delay treatment for 7 days. If the counts recover at this point continue at the initial dose. If the counts still fall within this range continue using a 20% dose reduction. If the platelet level falls below $50x10^9$/L reduce the dose by 50%.

Hepatic Impairment

Drug	Recommendation
Carboplatin	No dose reduction necessary

Renal Impairment

Drug	Dose (% of original dose)
Carboplatin	Significant changes in GFR (of more than 10%) may require dose adjustment Do not administer if the CrCl is less than 20ml/min

Regimen

The starting dose of carboplatin AUC6 is used with calculated GFR. AUC5 may be considered with EDTA clearance, seek advice from the appropriate consultant before prescribing. The recommended maximum dose when using a calculated creatinine clearance at AUC6 is 900mg. This will be set as 890mg in ARIA to comply with national dose bands. If you have an obese patient or an individual with a calculated creatinine clearance above 125ml/min please seek advice from the relevant consultant.

It should be noted that the dose of carboplatin may need to be altered if there is a change (improvement or reduction) in renal function of more than 10% from the previous cycle.

21 day cycle for 4 cycles

Drug	Dose	Days	Administration
Carboplatin	AUC6 (max dose)	1	Intravenous infusion in 500ml glucose 5% over 60 minutes

Dose Information

- Carboplatin will be dose banded according to the national dose band (10mg/ml)
- The maximum dose will be set at 890mg to comply with national dose bands

Administration Information

Extravasation

- Carboplatin - irritant

Additional Therapy

- Antiemetics

  15-30 minutes prior to chemotherapy;

  - ondansetron 8mg oral or intravenous
  - dexamethasone 8mg oral or intravenous

  As take home medication;

  - dexamethasone 4mg twice a day for 3 days oral
  - metoclopramide 10mg three times a day when required

- Gastric protection with a proton pump inhibitor or a H_2 antagonist may be considered in patients considered at high risk of GI ulceration or bleed

- Prophylactic antibiotics can be considered if required

References
1.National Institute of Clinical Excellence (2005). CG24. The Diagnosis and Treatment of Lung Cancer. Methods, Evidence and Guidance. DOH: London

REGIMEN SUMMARY

Carboplatin (AUC6) 4 Cycles

Day One

1. Dexamethsone 8mg oral or intravenous
   Administration Instructions
   This may be given as 8mg (or equivalent dose) intravenous if required

2. Ondansetron 8mg oral or intravenous
   Administration Instructions
   This may be given as 8mg intravenous if required

3. Carboplatin AUC6 intravenous infusion in 500ml glucose 5% over 60 minutes
   Administration Instructions
   This recommended maximum dose is 900mg based on a creatinine clearance of 125ml/min. This will be set at 890mg in ARIA to comply with national dose bands

Take Home Medicines

4. Dexamethasone 4mg twice a day oral for three days starting on day two of the cycle

5. Metoclopramide 10mg three times a day when required oral
   Administration Instructions
   Please supply 28x10mg tablets or nearest equivalent pack size.

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.3	22/06/22	Name changed Blood transfusion changed Dose banding changed to national dose bands Dose rounding removed Maximum dose added Coding removed Admin instructions added in summary	Dr Deborah Wright Pharmacist	Donna Kimber Pharmacy Technician
1.2	9th Jan 2010	Header changed to NHS badge AUC6 added to name Adverse effects put in table and toxicity removed Dose modification tabulated Renal and hepatic function tabulated Carboplatin paragraph amended under regimen Regimen tabulated Twice daily changed to twice a day Regimen name added to summary Metoclopramide dose changed to 10mg Ondansetron intravenous bolus changed to intravenous Coding heading changed Starting on day two added to dexamethasone Document control tabulated Hospital representation and disclaimer added	Dr Deborah Wright Pharmacist	Donna Kimber Pharmacy Technician
1.1	23rd Sept 2010	Font changed to Arial Header altered to include “Strength through Partnership” Drug names given capitals in regimen Extravasation moved to under Administration Information Footer changed to include regimen name and review date removed Standard paragraph added to introduction in dose modifications		

		Dose modifications format (not information) changed Dose information added to reflect super user agreements Granisetron removed from antiemetics Coding added Summary page added Document control added		

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust
NHS Isle of Wight
Portsmouth Hospitals NHS Trust
Salisbury Hospitals NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust
Western Sussex Hospitals NHS Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors which occur as a result of following these guidelines.