Chemotherapy Protocol

LUNG CANCER – NON-SMALL CELL (NSCLC)

CARBOPLATIN-VINORELBINE

(Intravenous and Oral)

Regimen

- NSCLC – Carboplatin-Vinorelbine (Intravenous and Oral)

Indication

- First line therapy of stage III or IV NSCLC
- WHO Performance status 0, 1, 2
- Palliative intent

Toxicity

Drug	Adverse Effect
Carboplatin	Neuropathy, thrombocytopenia
Vinorelbine	Neuropathy, stomatitis, transient elevation of LFTs, pain, constipation

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 day 1 and 8
- 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 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 if patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL

If the neutrophils are less than $1.5x10^9$/L, then 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 then 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%.

Dose adjustments for day eight should be made according to local practice guidelines or procedures.

Hepatic Impairment

Drug	Recommendation
Carboplatin	No dose reduction necessary
Vinorelbine	For the intravenous preparation consider a dose reduction to 20mg/m^2 in severe liver impairment For the oral preparation consider a dose of 50mg/m^2/week in moderate liver impairment

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
Vinorelbine	No dose adjustment is necessary

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.

The maximum dose of oral vinorelbine is 120mg for the 60mg/m^2 dose and 160mg for the 80mg/m^2 dose. The capsules are available in 20mg and 30mg strengths. It must be clear to all professionals and patients taking this treatment that it is a short term therapy that must not be supplied from primary care.

The maximum dose of intravenous vinorelbine is 60mg.

21 day cycle for 4 cycles

Drug	Dose	Days	Administration
Carboplatin	AUC6	1	Intravenous infusion in 500ml glucose 5% over 60 minutes
Vinorelbine	25mg/m^2 (max dose 60mg)	1	Intravenous bolus in 50ml sodium chloride 0.9% over 10 minutes
Vinorelbine	60mg/m^2 (max dose 120mg)	8	Oral

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

- Vinorelbine will be dose banded as per the national dose band (10mg/ml)
- Vinorelbine (oral) will be dose rounded to the nearest 20mg (up if halfway)

Administration

Extravasation

- Carboplatin – irritant
- Vinorelbine - vesicant

Other

- Oral vinorelbine capsules must be swallowed whole with food without chewing, sucking or dissolving the capsule.

Additional Therapy

- Antiemetics

  15-30 minutes prior to chemotherapy on **day one** only;

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

  As take home medication;

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

  15–30 minutes prior to vinorelbine on **day eight** only;

  - metoclopramide 10mg oral

- Gastric protection with PPI or H_2 antagonist may be considered in patients considered at high risk of GI ulceration or bleed
- Prophylactic antibiotics can be considered if required

Additional Information

- The National Patient Safety Alert on oral chemotherapy (NPSA/2008/RRR001) must be followed in relation to oral vinorelbine.

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

2.O'Brien ME, Szczesna A, Karnicka H et al. Vinorelbine alternating oral and intravenous plus carboplatin in advanced non-small cell lung cancer: results of a multicentre phase II study. Ann Oncol 2004; 15 (6): 921-927.

REGIMEN SUMMARY

Carboplatin (AUC6)-Vinorelbine IV/PO

Day One

1. Dexamethasone 8mg oral or intravenous
Administration Instructions
Administer 15-30 minutes prior to SACT. Administer dexamethasone 8mg intravenous or equivalent if required

2. Ondansetron 8mg oral or intravenous
Administration Instructions
Administer 15-30 minutes prior to SACT. Administer ondansetron 8mg intravenous if required

3. Vinorelbine 25mg/m^2 intravenous bolus in 50ml sodium chloride 0.9% over 10 minutes

4. Carboplatin AUC6 intravenous infusion in 500ml glucose 5% over 60 minutes

Take Home Medicines

5. Dexamethasone 4mg twice a day oral for 3 days starting on day two of the cycle
Administration Instructions
Take 4mg twice a day for 3 days starting on day 2 of the cycle

6. Metoclopramide 10mg three times a day when required oral
Administration Instructions
When required for the relief of nausea. Please supply five days or an original pack as appropriate.

Day Eight

7. Metoclopramide 10mg oral
Administration Instructions
Administer 15-30 minutes before oral SACT

8. Vinorelbine 60mg/m^2 oral
Administration instructions:
Vinorelbine capsules should be taken with or after food, swallowed whole, not chewed.
Oral SACT

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.3	Feb 2023	National dose banding added to vinorelbine and carboplatin Maximum dose of carboplatin amended as per national dose band Administration instructions added to regimen summary Coding removed	Alexandra Pritchard Pharmacist	Tom Hurst Pharmacy Technician
1.2	9th Jan 2014	Header changed to NHS badge AUC6 added to name and “and” replaced with dash Adverse effects put in table and toxicity removed >and < written in full Dose modification tabulated Renal and hepatic function tabulated. Vinorelbine information updated from SPC Carboplatin paragraph amended under regimen Regimen tabulated Vinorelbine changed to intravenous bolus over 10 minutes Twice daily now twice a day Bolus removed from injection Regimen name added to summary Metoclopramide dose changed to 10mg Starting on day two of the cycle 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	Dr Deborah Wright Pharmacist	Donna Kimber Pharmacy Technician

		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.