

Chemotherapy Protocol
HEAD AND NECK CANCER
CISPLATIN-FLUOROURACIL

[Regimen](#)

- Head and Neck Cancer – Cisplatin-Fluorouracil

[Indication](#)

- Neoadjuvant and palliative treatment of squamous cell carcinoma of the head and neck

[Toxicity](#)

Drug	Adverse Effect
Cisplatin	Neuropathy, nephrotoxicity, ototoxicity
Fluorouracil	Diarrhoea, stomatitis

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

[Monitoring](#)

Drugs

- FBC, LFTs and U&Es prior to each cycle
- Patients with complete or partial dihydropyrimidine dehydrogenase (DPD) deficiency are at increased risk of severe and fatal toxicity during treatment with fluorouracil. All patients should be tested for DPD deficiency before initiation (cycle 1) to minimise the risk of these reactions

[Dose Modifications](#)

The dose modifications listed are for haematological, liver and renal function and drug specific toxicities 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.

Haematological

Consider blood transfusion if patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL.

Criteria	Eligible Level
Neutrophils	$1.5 \times 10^9/L$ or greater
Platelets	$100 \times 10^9/L$ or greater

Defer treatment for 7 days if the neutrophil count is less than $1.5 \times 10^9/L$ and / or the platelet count is less than $100 \times 10^9/L$. If the counts have recovered to these levels at 7 days resume treatment. Consider using a 75% dose reduction. If the counts do not recover delay a further seven days. If they are satisfactory at 14 days treatment can be re-started using a 50% dose reduction.

Hepatic Impairment

Drug	Bilirubin ($\mu\text{mol/L}$)	AST/ALT units	Dose
Cisplatin	N/A	N/A	No dose reduction necessary
Fluorouracil	less than 85	less than 180	100%
	more than 85	more than 180	Contra-indicated

Renal Impairment

Drug	Creatinine Clearance (ml/min)	Dose (% of original dose)
Cisplatin	more than 60	100
	45-59	75
	less than 45	consider carboplatin
Fluorouracil		Consider dose reduction in severe renal impairment only

Other

Dose reductions or interruptions in therapy are not necessary for those toxicities that are considered unlikely to be serious or life threatening. For example, alopecia, altered taste or nail changes.

A cycle of chemotherapy should be delayed for up to two weeks to allow for a reduction in the severity of toxic events of NCI-CTC grade 3 or more to a severity of NCI-CTC grade 1 or less (with the exception of alopecia, fatigue, malaise, and nail changes). Delays beyond two weeks required discontinuation of chemotherapy

Cisplatin

Modifications in the dose of cisplatin are necessary for peripheral sensory and motor neurotoxicity, ototoxicity, or nephrotoxicity. Consider stopping treatment for patients with neurotoxicity or ototoxicity of NCI-CTC grade 3 or more.

Fluorouracil

Modifications in the dose of fluorouracil are necessary for mucositis and diarrhoea.

[Regimen](#)

21 day cycle

Neo-adjuvant – 2 cycles prior to radiotherapy

Palliative – 6 cycles

6 cycles will be set in Aria

Drug	Dose	Days	Administration
Cisplatin	100mg/m ²	1	Intravenous infusion in 1000ml sodium chloride 0.9% with 20mmol potassium chloride at a maximum rate of 1mg cisplatin/min (minimum time 120 minutes)
Fluorouracil	4000mg/m ²	1	Intravenous infusion over 96 hours

[Dose Information](#)

- Cisplatin will be dose banded in accordance with the national dose bands (1mg/ml)
- Fluorouracil will be dose banded in accordance with the national dose bands (50mg/ml)

[Administration Information](#)

Extravasation

- Cisplatin – exfoliant
- Fluorouracil - inflamitant

Other

- The fluorouracil is given as a continuous infusion over 96 hours. A central or PICC line is recommended for treatment to commence and continue.

Additional Therapy

- Antiemetics

15-30 minutes prior to chemotherapy

- aprepitant 125mg oral day 1
- aprepitant 80mg oral days 2, 3
- dexamethasone 4mg once a day oral
- ondansetron 8mg twice a day oral for 3 days
- metoclopramide 10mg three times a day when required oral

As take home medication

- aprepitant 80mg once a day for two days starting on day two of the cycle oral
 - dexamethasone 4mg once a day for three days starting on day two of the cycle oral
 - ondansetron 8mg twice a day for three days starting on the evening of day one of the cycle
 - metoclopramide 10mg three times a day when required oral
- Cisplatin pre and post hydration as follows;

Pre

Furosemide 40mg oral or intravenous

1000ml sodium chloride 0.9% with 20mmol potassium chloride and 16mmol magnesium sulphate over 60 minutes

Post

1000ml sodium chloride 0.9% with 20mmol potassium chloride and 16mmol magnesium sulphate over 60 minutes

Patients should be advised to drink at least 3 litres of fluid in the 24 hours after administration of cisplatin.

- Oral loperamide 4mg after the first loose stool then 2-4mg four times a day when required for the relief of diarrhoea (maximum 16mg/24 hours).
- Mouthwashes as per local or national guidelines
- Gastric protection with a proton pump inhibitor or a H₂ antagonist may be considered in patients considered at high risk of GI ulceration or bleed

References

1. Vermorken JB et al. EORTC 24971/TAX 323 Study Group. Cisplatin, fluorouracil and docetaxel in unresectable head and neck cancer. N Engl J Med 2007; 25: 357 (17): 1695-1704.

REGIMEN SUMMARY

Cisplatin-Fluorouracil

Day 1

1. Aprepitant 125mg oral
2. Dexamethasone 4mg oral or intravenous or equivalent dose
3. Ondansetron 8mg oral or intravenous
4. Furosemide 40mg oral or intravenous
5. 1000ml sodium chloride 0.9% with 20mmol potassium chloride and 16mmol magnesium sulphate over 60 minutes
6. Cisplatin 100mg/m² intravenous infusion in 1000ml sodium chloride 0.9% with 20mmol potassium chloride at a maximum rate of 1mg cisplatin/minute (minimum time 120 minutes)
7. 1000ml sodium chloride 0.9% with 20mmol potassium chloride and 16mmol magnesium sulphate over 60 minutes
8. Fluorouracil 4000mg/m² over 96 hours intravenous infusion

Take Home Medicines

1. Aprepitant 80mg once a day for two days starting on day two of the cycle oral
2. Dexamethasone 4mg once a day for three days starting on day two of the cycle oral
3. Ondansetron 8mg twice a day for three days starting on the evening of day one of the cycle
4. Metoclopramide 10mg three times a day when required oral

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.1	Nov 2020	Updated monitoring with DPD testing Dose banding updated Coding removed	Donna Kimber Pharmacy Technician	Rebecca Wills Pharmacist
1	Dec 2013	None	Dr Deborah Wright Pharmacist	Dr C Baughan Consultant Clinical Oncologist

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 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, it remains the responsibility of the prescriber to ensure the correct drugs and doses are prescribed for patients.