

Carboplatin (seminoma)

Indication

Adjuvant treatment of stage one seminoma

Treatment of stage IIA or IIB seminoma with para-aortic radiotherapy – the carboplatin is administered first with radiotherapy usually starting after 3 to 4 weeks.

ICD-10 codes

Codes pre-fixed with C38, C48, C62, C63, C75.

Regimen details

| Day | Drug | Dose | Route |
|-----|-------------|--------|-------------|
| 1 | Carboplatin | AUC 7* | IV infusion |

* Carboplatin dose calculated using the Calvert equation: **Carboplatin dose (mg) = AUC (CrCl +25)**

An EDTA should be performed to measure the CrCl. If this is not possible a 24 hour urine collection should be performed to measure the CrCl

Cycle frequency

N/A

Number of cycles

1 cycle only

Administration

Carboplatin is administered in 500mL glucose 5% over 30-60 minutes.

Patients should be observed closely for hypersensitivity reactions. Hypersensitivity reactions may occur within a few minutes following the initiation of the infusion of carboplatin. Facilities for the treatment of hypotension and bronchospasm **must** be available.

If hypersensitivity reactions occur, minor symptoms such as flushing or localised cutaneous reactions do not require discontinuation of therapy. The infusion may be temporarily interrupted and when symptoms improve restarted at a slower infusion rate. Chlorphenamine 10mg IV may be administered. Severe reactions, such as hypotension, bronchospasm or generalised rash/erythema require immediate discontinuation of carboplatin and appropriate therapy.

Pre-medication

None

Emetogenicity

This regimen has moderate -high emetic potential

Additional supportive medication

H₂ antagonist or proton pump inhibitor if required.

Mouthwashes as per local policy.

Anti-emetics as per local policy.

Extravasation

Carboplatin is an irritant (Group 3)

Investigations – pre first cycle

| Investigation | Validity period |
|----------------------------|-----------------|
| FBC | 14 days |
| U+E (including creatinine) | 14 days |
| LFTS | 14 days |
| Magnesium | 14 days |
| EDTA creatinine clearance | 28 days |
| AFP, HCG, LDH | 14 days |
| LH, FSH and testosterone | 28 days |

Where appropriate offer pre-treatment sperm storage.

Investigations – pre subsequent cycles

N/A

Standard limits for administration to go ahead If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant

| Investigation | Limit |
|-----------------------------|--------------------------|
| WBC | $\geq 3.0 \times 10^9/L$ |
| Neutrophils | $\geq 1.0 \times 10^9/L$ |
| Platelets | $\geq 100 \times 10^9/L$ |
| Creatinine Clearance (CrCl) | $\geq 20\text{mL/min}$ |

Dose modifications

- **Haematological toxicity**

N/A

- **Renal impairment**

Carboplatin is contra-indicated if CrCl $< 20\text{mL/min}$.

- **Hepatic impairment**

N/A

Adverse effects - for full details consult product literature/ reference texts

- **Serious side effects**

Myelosuppression
 Nephrotoxicity
 Ototoxicity
 Neurotoxicity
 Infertility
 Hypersensitivity reactions

- **Frequently occurring side effects**

Myelosuppression
 Constipation, diarrhoea
 Stomatitis, mucositis
 Nausea and vomiting

- **Other side effects**

Electrolyte disturbances

Taste disturbance

Fatigue

Significant drug interactions – for full details consult product literature/ reference texts

Warfarin/coumarin anticoagulants: Avoid use due to elevations in INR. Switch to low molecular weight heparin during treatment.

Aminoglycoside antibiotics: increased risk of nephrotoxicity and ototoxicity

Clozapine: increased risk of agranulocytosis, avoid concomitant use

Diuretics: increased risk of nephrotoxicity and ototoxicity

Nephrotoxic drugs: increased nephrotoxicity ; not recommended

Phenytoin: carboplatin reduces absorption and efficacy of phenytoin

Additional comments

References

- Summary of Product Characteristics Carboplatin (Hospira) accessed 25 November 2015 via www.medicines.org.uk
 - Oliver RT, Mason MD, Mead GM et al. Radiotherapy versus single dose carboplatin in adjuvant treatment of stage 1 seminoma: a randomised trial. Lancet 2005, 366; 293-300
 - Horwich A, Dearnaley D, Sohaib A et al. Neoadjuvant carboplatin before radiotherapy in stage IIA and IIB seminoma. Annals of Oncology 2013, 24; 2104-2107
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Written/reviewed by: Dr J Braybrooke (Consultant Oncologist, UHBristol NHS Trust)

Checked by: Sarah Murdoch (Senior Oncology Pharmacist, SW Clinical Network)

Authorised by: Dr J Braybrooke (Consultant Oncologist, UHBristol NHS Trust, SW Clinical Network)

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