



MONOGRAPH

cARBOplatin

| | |
|----------------|----------------------------|
| Scope (Staff): | Medical, Pharmacy, Nursing |
| Scope (Area): | Oncology and Haematology |

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [DISCLAIMER](#)

! HIGH RISK MEDICINE !

QUICKLINKS

| | | | |
|---|--------------------------------|-------------------------------|----------------------------|
| Dosage/Dosage Adjustments | Administration | Compatibility | Monitoring |
|---|--------------------------------|-------------------------------|----------------------------|

DRUG CLASS

Platinum compound¹

cARBOplatin is a [High Risk Medicine](#).

cARBOplatin is a [Cytotoxic Medicine](#).

Extravasation: cARBOplatin is an irritant at concentrations of ≥ 10 mg/mL.² Refer to [Extravasation of Antineoplastic \(Cytotoxic\) Agents Policy](#).

Emetogenic Rating: High. Refer to [Chemotherapy Induced Nausea and Vomiting \(CINV\) Management Guideline](#).

INDICATIONS AND RESTRICTIONS

- cARBOplatin can only be prescribed by Oncologists or Haematologists as per protocol for the treatment of malignancy.

CONTRAINDICATIONS

- Hypersensitivity to cARBOplatin or any component of the formulation.
- Severe myelosuppression.^{3, 4}
- Severe bleeding.^{3, 4}
- History of severe allergic reactions to cARBOplatin, other platinum containing compounds or mannitol.^{1, 3, 4}

PRECAUTIONS

Medication errors have occurred due to confusion between cisplatin and cARBOplatin.

- Avoid aluminium containing needles or administration sets, as aluminium reacts with cARBOplatin causing black precipitate formation and loss of potency.^{1, 3, 4, 5, 6}
- Use of cARBOplatin in combination with other nephrotoxic drugs leads to an additive risk of nephrotoxicity; use with caution.^{1, 3, 4}
- Previous cisplatin treatment may increase the risk of peripheral neuropathy and ototoxicity; use with caution.³
- Use of carboplatin with concurrent ototoxic drugs leads to an additive risk of ototoxicity; use with caution.³
- Cytotoxic precautions are to be followed regarding the handling of patient waste. Refer to the [Antineoplastic \(Cytotoxic\) Agents Safe Handling and Administration](#) guideline.
- Hypersensitivity reactions are seen more frequently with repeated courses of therapy.^{1, 4, 5, 7}

FORMULATIONS

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- Vial for injection: 450 mg/45 mL (10 mg/mL)

Imprest location: [Formulary One](#)

DOSAGE & DOSAGE ADJUSTMENTS

Dosage as per treatment protocol.

Renal impairment:

- Dose adjustment is necessary with reduced glomerular filtration rate (GFR) or creatinine clearance, refer to treatment protocol or contact pharmacy for guidelines.^{3, 4, 5, 7.}
- [eGFR calculator](#)

Hepatic impairment:

- No dose adjustments are necessary for hepatic impairment.⁷

Treatment related toxicity:

- Dose adjustment as per treatment protocol.

RECONSTITUTION & ADMINISTRATION

- Handle as [cytotoxic](#).
- cARBOplatin must be compounded in a cytotoxic drug safety cabinet by pharmacy personnel who have appropriate training and validation in aseptic and cytotoxic drug reconstitution and handling techniques.
 - The prescribed dose is to be drawn up and added to an appropriate volume of glucose 5% for infusion.^{3, 5, 8}
- **IV:** infuse the diluted solution over 15-60 minutes.⁶
- **Continuous infusion:** May infuse the diluted solution (to a concentration as low as 0.5 mg/mL) by continuous infusion over 24 hours.⁶

COMPATIBILITY (*LIST IS NOT EXHAUSTIVE*)

Compatible fluids:

- Glucose 5%.^{3, 5, 8}
- Sodium Chloride 0.9%.⁹

Only commonly used drugs are listed below. This is not a complete list of incompatible drugs. [Compatibilities of IV drugs](#) must be checked when two or more drugs are given concurrently.

INCOMPATIBLE drugs:

- Mesna^{8, 9}
- Fluorouracil⁹
- Sodium bicarbonate⁹

MONITORING

Monitor as per treatment protocol.

- Complete blood count with differential and platelets.^{1, 3, 4, 6, 9}
- Renal function^{1, 3}
- Hearing tests^{1, 6}
- Symptoms of neuropathy¹
- Hypersensitivity⁶
- Liver function tests⁶
- Serum uric acid⁹

ADVERSE EFFECTS

Common (>20% of patients): thrombocytopenia, neutropenia, leukopenia, anaemia, nausea, vomiting, elevated alkaline phosphatase (ALP), hyponatraemia, hypokalaemia, hypocalcaemia, hypomagnesaemia, pain.⁵

Infrequent (4-20% of patients): Infection, bleeding, peripheral neuropathy, elevated serum creatinine, elevated blood urea, elevated bilirubin, elevated aspartate aminotransferase (AST), weakness, diarrhoea, constipation, hypersensitivity.⁵

Rare (≤3% of patients): Ototoxicity, vision loss, changes in taste, anaphylaxis, alopecia, mucositis, injection site reactions, anorexia, rash, febrile neutropenia, haemolytic-uremic syndrome, acute renal failure.^{1, 5}

STORAGE

Vial: Store below 25°C. Do not Freeze. Protect from light.⁸

Compounded product: Refrigerate. Do not Freeze.³ For storage and expiry information refer to the primary packaging of the PCS compounded product.

INTERACTIONS

This medication may interact with other medications; consult PCH approved references (e.g. [Clinical Pharmacology](#)), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

Please note: The information contained in this guideline is to assist with the preparation and administration of cARBOplatin. Any variations to the doses recommended should be clarified with the prescriber prior to administration

Related CAHS internal policies, procedures and guidelines

[Antineoplastic \(Cytotoxic\) Agents \(health.wa.gov.au\)](http://health.wa.gov.au)

[Anti-cancer Therapy Induced Nausea and Vomiting \(AINV\) Management \(health.wa.gov.au\)](http://health.wa.gov.au)

[Extravasation of Antineoplastic \(Cytotoxic\) Agents \(health.wa.gov.au\)](http://health.wa.gov.au)

References

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 2. Children's Oncology Group. Extravasation Reference 2015 [cited 6th October 2022]. Available from: <https://www.cogmembers.org/files/disc/Nursing/ExtravasationReference.pdf>.
 3. MIMS Online. DBL Carboplatin Injection 2022 [cited 18th August 2022]. Available from: <https://www.mimsonline.com.au>.
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 8. Australian Injectable Drugs Handbook. cARBOplatin - antineoplastic 2022 [cited 4th October 2022]. Available from: [AIDH - cARBOplatin \(health.wa.gov.au\)](http://health.wa.gov.au)



References

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