

BC Cancer Protocol Summary for CARBOplatin and Etoposide in the Treatment of Recurrent Ependymoma and Oligodendroglioma

Protocol Code

CNCARV

Tumour Group

Neuro-Oncology

Contact Physician

Dr. Brian Thiessen

ELIGIBILITY

- Diagnosed recurrent ependymoma, post-surgery and/or Radiation Therapy.
- 2nd line for recurrent oligodendroglioma.
- 3rd and 4th line treatment of recurrent high grade gliomas, including oligodendroglioma
- Life expectancy greater than 3 months.
- Normal renal, hepatic and bone marrow function.

TESTS:

- **Baseline:** CBC and differential, platelets, creatinine, ALT, bilirubin, electrolytes, magnesium, calcium
- Before each treatment:
 - Day 1: CBC and differential, platelets, creatinine
 - Day 14 and 21: CBC and differential
- CT/MRI every second to third cycle
- If clinically indicated: [ALT](#), [Bilirubin](#)

PREMEDICATIONS:

- Antiemetic protocol for High/Moderate emetogenic chemotherapy
- Hydrocortisone & diphenhydramine for history of hypersensitivity to etoposide

TREATMENT:

| Drug | Dose | BC Cancer Administration Guideline |
|-------------|------------------------|---|
| CARBOplatin | Dose = AUC* x (GFR+25) | IV in 100 to 250 mL NS over 30 min |
| etoposide | 100 mg/m ² | IV in 250 to 1000 mL NS over 45 min to 1 hour 30 min (use non-DEHP bag and non-DEHP tubing with 0.2 micron in-line filter) |

*AUC = 5

GFR preferably from nuclear renogram, if not possible use:

$$\text{GFR} = \frac{N \times (140 - \text{age in years}) \times \text{wt (kg)}}{\text{serum creatinine (micromol/L)}} \quad N = 1.04 \text{ (women) or } 1.23 \text{ (men)}$$

The estimated GFR calculated using the Cockcroft-Gault equation should be capped at 125 mL/min when it is used to calculate the initial carboplatin dose. When a nuclear renogram is available, this clearance would take precedence.

Repeat every 28 days until progression as tolerated

DOSE MODIFICATIONS:

1. For Hematology: modify both drugs.

| ANC (x10 ⁹ /L) | | Platelets (x10 ⁹ /L) | Dose (both drugs) |
|------------------------------|-----|---------------------------------|-------------------|
| greater than or equal to 1.5 | and | greater than or equal to 100 | 100% |
| | | less than 100 | delay |
| 1.0 to less than 1.5 | and | greater than or equal to 100 | 75% |
| | | less than 100 | delay |
| less than 1.0 | and | greater than or equal to 100 | delay |
| | | less than 100 | delay |

- For platelets nadir less than 50 x10⁹/L, 25% dose reduction for both drugs.
- For neutropenic fever, 25% dose reduction for both drugs.

2. For serum creatinine 1.5 times upper limit normal, review program.
3. For symptomatic neuropathy - review program.
4. **Hepatic dysfunction:** if ALT greater than 5 x ULN or bilirubin greater than 25 micromol/L, hold chemotherapy until liver function returns to normal.

PRECAUTIONS:

1. Hypersensitivity: Monitor infusion of etoposide for the first 15 minutes for signs of hypotension. Hypersensitivity reactions have also been reported for CARBOplatin. Refer to BC Cancer Hypersensitivity Guidelines.
2. Extravasation: etoposide causes irritation if extravasated. Refer to BC Cancer Extravasation Guidelines.
3. Neutropenia: Fever or other evidence of infection must be assessed promptly and treated aggressively.
4. Progression - greater than 25% increase in measurable disease or progressive neurological dysfunction.

Call Dr. Brian Thiessen or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.