BCCA Protocol Summary for Lomustine (CCNU) for Treatment of Recurrent Malignant Brain Tumours

Protocol Code: CNCCNU

Tumour Group: Neuro-Oncology

Contact Physician: Dr. Brian Thiessen

ELIGIBILITY
1. Recurrent malignant gliomas
2. ECOG 0-2
3. Normal hematological, hepatic and renal function

TESTS
- Baseline: CBC and differential, platelets, serum creatinine, serum glucose (patients on dexamethasone), AST, ALT, bilirubin.
- Baseline Neuroimaging
- Before each treatment:
  - Day 1: CBC and differential, AST, ALT, bilirubin, serum creatinine
  - Day 28: CBC and differential, platelets
- Neuroimaging every second (ie, odd-numbered) cycle (BEFORE #1, 3, 5, etc)
- After 6 cycles: Pulmonary function tests if further treatment considered

PREMEDICATIONS:
- Antiemetic protocol for Low/Moderate emetogenic chemotherapy (see protocol SCNAUSEA)

TREATMENT:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose*</th>
<th>BCCA Administration Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lomustine (CCNU)</td>
<td>110 mg/m² or 130 mg/m² on Day 1 every 6 weeks** (round dose to closest 10 mg)</td>
<td>PO at bedtime on empty stomach</td>
</tr>
</tbody>
</table>

*Use 110 mg/m² for patients who have received prior alkylators (eg temozolomide)

** This time interval may need to be modified with repeated courses

- Assess after 6 cycles. Further treatment associated with increased risk of pulmonary toxicity. Consider pulmonary function tests if further treatment considered.
- Discontinue Lomustine for progressive disease or intolerable side effects.
DOSE MODIFICATIONS:

1. Hematological:

<table>
<thead>
<tr>
<th>ANC (x10⁹/L)</th>
<th>Platelets (x10⁹/L)</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>greater than 1.5</td>
<td>or</td>
<td>give 100%</td>
</tr>
<tr>
<td>1 to 1.5</td>
<td>and/or</td>
<td>80-100</td>
</tr>
<tr>
<td>less than 1</td>
<td>and/or</td>
<td>delay 1 week and resume at 60% of the original dose (Note: this will be the new 100% dose thereafter)*</td>
</tr>
</tbody>
</table>

* If more than 2 delays, CONSULT contact physician.

2. Renal dysfunction:

<table>
<thead>
<tr>
<th>Creatinine clearance (mL/min)</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>greater than 50</td>
<td>100%</td>
</tr>
<tr>
<td>10 to 50</td>
<td>75%</td>
</tr>
<tr>
<td>less than 10</td>
<td>50%</td>
</tr>
</tbody>
</table>

If serum creatinine greater than 150 micromol/L, reconsider the use of lomustine.

3. Hepatic dysfunction: If AST/ALT greater than 5 x ULN or bilirubin greater than 25 micromol/L, hold chemotherapy until liver function returns to normal.

PRECAUTIONS:

1. Neutropenia: Fever or other evidence of infection must be assessed promptly and treated aggressively.

2. A vomited dose should not be repeated if it occurs more than 30-45 minutes after the dose.

3. Pulmonary toxicity has been reported at cumulative doses usually greater than 1100 mg/m²; however it has also occurred with lower doses.

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.

Date activated: N/A

Date revised: 1 Apr 2017 (Reformatted with various clarifications)