## CVP plus Rituximab (R-CVP) for Lymphoma

**Indication:**
First line low grade Non-Hodgkin’s Lymphoma  
Induction remission in relapsed / refractory low grade Non-Hodgkin’s Lymphoma

**Regimen details:**
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Route</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rituximab</td>
<td>375mg/m²</td>
<td>IV</td>
<td>Day 1</td>
</tr>
<tr>
<td>Cyclophosphamide</td>
<td>750mg/m²</td>
<td>IV</td>
<td>Day 1</td>
</tr>
<tr>
<td>Vincristine</td>
<td>1.4mg/m² (max 2mg)</td>
<td>IV</td>
<td>Day 1</td>
</tr>
<tr>
<td>Prednisolone</td>
<td>100mg</td>
<td>Orally</td>
<td>Days 1 to 5</td>
</tr>
</tbody>
</table>

**Administration:**
- **Rituximab**: IV infusion in 500ml sodium chloride. Rate as per rituximab administration guidance. Administer before CVP.
- **Cyclophosphamide**: IV infusion in 100-250ml sodium chloride 0.9% over 30 minutes or IV bolus.
- **Vincristine**: IV infusion in 50ml sodium chloride 0.9% over 5 minutes.
- **Prednisolone**: Orally. With or after food. Available as 5mg and 25mg tablets.

**Premedication:**
- 30 minutes prior to rituximab:
  - Paracetamol 1000mg orally
  - Chlorphenamine 10mg IV
  - Prednisolone 100mg orally (Day 1 of CVP chemotherapy)

**Frequency:**
21 day cycle for 8 cycles

**Extravasation:**
Vincristine is a vesicant and should be administered with appropriate precautions to prevent extravasation. If there is any possibility that extravasation has occurred, contact a senior member of the medical team and follow local protocol for dealing with cytotoxic extravasation.

**Anti-emetics:**
Moderate emetogenic potential (30% - 90%) e.g. ondansetron 8mg orally prior to chemotherapy and metoclopramide 20mg orally for 3 days after chemotherapy.

**Supportive medication:**
- Allopurinol 300mg od orally (100mg if renal impairment) for prevention of tumour lysis syndrome for first cycle only.
- PPI prophylaxis e.g. omeprazole 20mg od orally.

**Regular investigations:**
- Baseline & regular
- FBC Prior to each cycle
- LFTs Prior to each cycle
- U&Es Prior to each cycle

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**Reason for Update:** Network Protocol Development  
**Approved by Consultant:** P Fields  
**Version:** 1  
**Approved by Chair Haem TWG:** M Kazmi  
**Supersedes:** All other versions  
**Date:** 11/04/2011  
**Prepared by:** Laura Cameron  
**Checked by (Network Pharmacist):** J Turner
Dose Modifications

Haematological Toxicity

Prior to every cycle of CVP-R

<table>
<thead>
<tr>
<th>Neutrophils (x 10^9/L)</th>
<th>Platelets (x 10^9/L)</th>
<th>CVP</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥1.0 x 10^9/L</td>
<td>&amp;</td>
<td>100% dose</td>
</tr>
</tbody>
</table>
| <1.0 x 10^9/L          | or                   | Curative intent: discuss with Consultant use of pegfilgrastim to maintain dose intensity Without curative intents, delay until neutrophils > 1.0 x 10^9/L and platelets > 100 x 10^9/L and dose reduce cyclophosphamide by 20% for all further cycles.

Renal Impairment

<table>
<thead>
<tr>
<th>CrCl (ml/min)</th>
<th>Cyclophosphamide Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 50</td>
<td>Give 100%</td>
</tr>
<tr>
<td>10 – 50</td>
<td>Give 75%</td>
</tr>
<tr>
<td>&lt; 10</td>
<td>Give 50%</td>
</tr>
</tbody>
</table>

Hepatic Impairment

<table>
<thead>
<tr>
<th>Bilirubin (µmol/l)</th>
<th>ALT / AST (unit/l)</th>
<th>Vincristine Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 50</td>
<td>60-80</td>
<td>Give 50%</td>
</tr>
<tr>
<td>51 – 85</td>
<td>Normal</td>
<td>Give 50%</td>
</tr>
<tr>
<td>&gt; 85</td>
<td>&gt; 180</td>
<td>Omit</td>
</tr>
</tbody>
</table>

Toxicities: Myelosuppression, Neurotoxicity – monitor for constipation or peripheral sensory loss and discuss with Consultant before administering further cycles. Consider dose reducing vincristine to 1mg or substituting for vinblastine.

Drug interactions: Concurrent administration of vincristine and itraconazole, voriconazole, posaconazole have been reported to cause increased severity of neuromuscular side effects and is therefore contra-indicated.

Comments: None

NICE TAG 110 September 2006 Rituximab for the treatment of follicular lymphoma.
NICE TAG 137 February 2008 Rituximab for the treatment of relapsed or refractory stage III or IV follicular non-Hodgkin’s lymphoma.