# R-CHOP-14 (based on the R-CHOP-21 vs 14 Trial)

**INDICATION:** High grade B-cell lymphomas

**Prior to a course of treatment:**

- Assess cardiac function by history & exam, ECG and CXR. If there is evidence of cardiac disease or risk factors, prior anthracyclines or patient > 70yrs perform a MUGA scan. If LVEF< 50% CHOP-14 may be inappropriate – *discuss with consultant*.
- Check FBC. Patient must have adequate marrow reserve - neutrophils >1.5, platelets >100 unless cytopaenia is due to disease, e.g marrow infiltration, splenomegaly
- Check renal and liver function – *if abnormal see dose modification and discuss with consultant*
- Check hepatitis B & C serology
- If appropriate discuss possibility of pregnancy with female patients and need for contraception with both male and female patients. Discuss risk of infertility - offer semen cryopreservation to male patients
- Written consent for course

**Prior to each cycle:**

- Medical review of fitness for chemotherapy – exclude active infection, major changes in organ function
- Check FBC - neutrophils should be >1.5 and platelets >80 *(see dose modifications)*

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|---|---|---|---|
| Rituximab | 375mg/m$^2$ in 0.5L N saline | IV | day 1 (*see protocol for rituximab)* |
| Cyclophosphamide | 750mg/m$^2$ | IV bolus | day 1 |
| Doxorubicin | 50mg/m$^2$ | IV bolus | day 1 |
| Vincristine | 2mg | IV bolus | day 1 |
| Prednisolone | 100mg* | PO | days 1-5 |
| GCSF | - ** | SC | od days 4-12 |

* note dose of prednisolone differs from R-CHOP-21

** if BSA > 1.8m$^2$ use higher dose, e.g Granocyte 368mcg SC od

**Cycle to be repeated every 14 days for up to 6 cycles**

*Note: in the RCHOP-14 vs RCHOP21 trial R-CHOP-14 will normally be given for 6 cycles plus two further cycles of rituximab alone every 14 days*

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| **Prophylaxis for acute emesis** | 5HT antagonist |
| **Prophylaxis for delayed emesis** | 5HT antagonist + metaclopramide 3-4 days |
| **Other medications** | Allopurinol 300mg od days 1-5 for cycle 1 |
| | Anti-infective prophylaxis according to local policy |

**Dose modification for neutropenia (unless due lymphoma) and infection**

- Neutrophils <1.5 on day of treatment — Delay cycle for 3 days and continue GCSF
- After 3 days neutrophils remain < 1.5 — Delay for a further 3-4 days and continue GCSF
- If therapy postponed for one week and neutrophils remain <1.5 — Delay further treatment with check FBC every 3 days until neutrophils >1.5, then proceed but with reduced doses as below:

| | Cyclophosphamide | Doxorubicin | Vincristine | Prednisolone |
|---|---|---|---|---|
| Therapy postponed 0-7 days | No reduction | No reduction | No reduction | No reduction |
| Therapy postponed 8-14 days | 25% dose reduction | 25% dose reduction | No reduction | No reduction |
| Therapy postponed > 14days | 50% dose reduction | 50% dose reduction | No reduction | No reduction |

**Dose modification for thrombocytopenia (unless due to lymphoma)**

- Platelets <80 on day of treatment — Delay cycle for 3 days
- Platelets remain <80 after 3 days delay — Delay for further 3-4 days
- After one week delay platelets remain <80 — Delay further treatment and check FBC every 3 days until platelets > 80 then proceed but at reduced doses as below:

| | Cyclophosphamide | Doxorubicin | Vincristine | Prednisolone |
|---|---|---|---|---|
| Therapy postponed 0-7 days | No reduction | No reduction | No reduction | No reduction |
| Therapy postponed 8-14 days | 25% dose reduction | 25% dose reduction | No reduction | No reduction |
| Therapy postponed > 14 days | 50% dose reduction | 50% dose reduction | No reduction | No reduction |

**For cardiotoxicity**

- If symptoms or signs of cardiac failure develop, measure LVEF by MUGA scan. *Inform consultant*.
- If cardiac function is impaired further CHOP-14 may inappropriate – *discuss with consultant.*

**For liver dysfunction (unless due to lymphoma)**

- Bilirubin <1.5x upper limit of normal — 100% dose doxorubicin
- Bilirubin 1.5 – 3 x upper limit of normal — 50% dose doxorubicin
- Bilirubin > 3 x upper limit of normal — Consider whether CHOP-14 is appropriate or 25% dose – *discuss with consultant*

**For renal dysfunction**

- If Creat. Clearance <10ml/min — CHOP-14 may be inappropriate or consider using 50% cyclophosphamide – *discuss with consultant*

**For vincristine neurological toxicity**

- Grade 2 motor (*mild objective weakness interfering with function but not with activities of daily living*) or grade 3 sensory (*sensory loss or paraesthesia interfering with activities of daily living*) toxicity — Reduce vincristine dose to 1mg

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| • Neurological toxicity increases despite dose reduction. | Stop vincristine |

| **RCHOP-14 - Toxicities** | |
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| Neutropenic sepsis | Mucositis |
| Thrombocytopenia | Sensory & motor neuropathy |
| Nausea & vomiting (moderate) | Autonomic neuropathy (constipation, ileus) |
| Alopecia | Amenorrhoea & infertility (offer semen cryopreservation) |
| Cardiomyopathy | Jaw pain |
| Hyperglycaemia | Haemorrhagic cystitis |
| Fever, chills, hypotension, rigors & anaphylaxis (rituximab) – usually first dose only | |


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