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

INDICATION: High and low grade B-cell lymphomas, and lymphoproliferative disease

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% discuss with consultant
- Check FBC. Patient must have adequate marrow reserve neutrophils >1.0, platelets >75 unless cytopaenia is due to disease, e.g marrow infiltration, splenomegaly
- Check hepatitis B & C serology
- Check renal and liver function see dose modification and discuss with consultant if abnormal
- 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 & U&Es neutrophils should be >1.0 and platelets >75 (see dose modifications)

Rituximab	375mg/m ² in 0.5L N saline		IV	day 1 (see protocol for rituximab)	
Cyclophosphamide	750mg/m	1 ²	IV bolus	day 1	
Doxorubicin	50mg/m ²		IV bolus	day 1	
Vincristine	1.4mg/m	2 *	IV bolus	day 1	
Prednisolone	40mg/m ²		PO	days 1-5	
* max. 2mg					
Cycle to be repeated every 21 days for up to 8 cycles					
Prophylaxis for acute emesis		5HT antagonist			
Prophylaxis for delayed emesis		5HT antagonist + metoclopramide 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 to lymphoma) and infection				
• Neutrophils < 1.0 on day 1	Delay 1 week and proceed at 100% if they recover			
Neutrophils remain < 1.0 despite delay	Give GCSF for up to 1 week			
If no recovery despite GCSF	Further treatment may be inappropriate - <i>discuss</i> with consultant			
 If treatment is delayed > 1week, or >1 delay, or an episode of neutropenic sepsis 	GCSF prophylaxis with subsequent cycles			

LSCCN HAEMATOLOGY PROTOCOLS

If further treatment delay or neutropenic sepsis
 despite GCSF

Consider proceeding at 50-75% dose cyclophosphamide & doxorubicin – *discuss with consultant*

Dose modification for thrombocytopenia (unless due to lymphoma)

• Platelets <75 on day treatment due

Delay cycle 1-2 weeks – if no recovery consider proceeding at 50-75% dose cyclophosphamide & doxorubicin or proceed at 100% dose with platelet support if needed - *discuss with consultant*

For cardiotoxicity

- If symptoms or signs of cardiac failure develop, discontinue doxorubicin and measure LVEF by MUGA scan. *Inform consultant*.
- Consider substituting doxorubicin with etoposide (see 'modified CHOP-like' protocol) *discuss with* consultant

For liver dysfunction (unless due to lymphoma)

100% dose doxorubicin Bilirubin <1.5x upper limit of normal • 50% dose doxorubicin Bilirubin 1.5 – 3 x upper limit of normal • Bilirubin > 3 x upper limit of normal Consider 25% dose or stopping CHOP For renal dysfunction Consider stopping CHOP 50% If Creat. Clearance <10ml/min or using cyclophosphamide - discuss with consultant For vincristine neurological toxicity Grade 2 motor (mild objective weakness interfering Reduce vincristine dose to 1mg ٠ with function but not with activities of daily living) or grade 3 sensory (sensory loss or paresthesia interfering with activities of daily living) toxicity Stop vincristine Neurological toxicity increases despite reduction. •

R-CHOP21 toxicities	
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, hypotension, rigors, anaphylaxis (rituximab)	

Written by Dr MP Macheta, Consultant Haematologist

Date July 2013

Review date July 2015

LSCCN HAEMATOLOGY PROTOCOLS