

BCCA Protocol Summary for Treatment of Lymphoma with Gemcitabine, Dexamethasone and Cisplatin (GDP)

Protocol Code	LYGDP
Tumour Group	Lymphoma
Contact Physician	Dr Laurie Sehn

ELIGIBILITY:

- Patients with relapsed aggressive non-Hodgkin's lymphomas with good performance status being treated with curative intent (note: patients whose disease responds to LYGDP may be candidates for high dose chemo-radiotherapy and heme stem cell transplant)
- Patients with relapsed or refractory Hodgkin lymphoma with good performance status being treated with curative intent
- A "Class II Drug Registration Form" must be submitted for Gemcitabine at the time of initiation of treatment. For other indications, or for more than 6 cycles, an "Individual use of Benefit Drug List Medication for an Undesignated Indication" form must be approved.

EXCLUSIONS:

- Age greater than 70 years
- Creatinine clearance (CrCl) less than 45 mL/min
- CNS involvement

TESTS:

- Baseline, then as indicated:
 - Required before first treatment: CBC & diff, platelets, creatinine
 - Required, but results do not have to be available to proceed with first treatment: HBsAg, HBcoreAb
 - Recommended but optional: bilirubin, alkaline phosphatase, magnesium, calcium
- Before day 1 of each treatment cycle: CBC & diff, platelets, creatinine
- If cisplatin dose is given day 1 and 8: before day 8 of each treatment cycle: creatinine
- NOTE: Day 8 CBC & diff, platelets are not required and there are no dose modifications due to CBC & diff, platelets on day 8
- Before each treatment cycle: Use calculated creatinine clearance and serum creatinine to determine cisplatin dose, see dose modifications below.

PREMEDICATIONS:

Day 1 (and day 8 if cisplatin being given)

Ondansetron 8 mg PO/IV daily pre-chemotherapy

Dexamethasone 12 mg PO/IV pre-chemotherapy then q 8 h x 4 doses

Aprepitant 125 mg PO pre-chemotherapy and **80 mg** PO post-chemotherapy once daily on Days 2 and 3

(Note: This anti-emetic premedication is separate from the Dexamethasone given as part of the protocol; both should be prescribed separately.)

Day 8 (unless cisplatin being given)

Prochlorperazine 10 mg PO pre-chemotherapy

- additional antiemetics as required

TREATMENT:

Drug	Dose	BCCA Administration Guideline
Gemcitabine	1000 mg/m ² day 1 & 8	IV in 250 mL NS over 30 min*
Dexamethasone	40 mg/d days 1-4	Oral daily in am with food <i>(Note: The anti-emetic premedication is separate from the Dexamethasone given as part of the protocol; both should be prescribed separately.)</i>
Cisplatin	75 mg/m ² days 1	Prehydrate with 1000 mL NS over 1 hour, then Cisplatin IV in 500 mL NS with 20 mEq KCl, 1 g MgSO ₄ , 30 g mannitol over 1 hour

* Gemcitabine may be given during prehydration for cisplatin

Estimate calculated creatinine clearance (CrCl) with following formula:

$$\text{CrCl (mL/min)} = \frac{N \times (140 - \text{age in years}) \times \text{wt (kg)}}{\text{serum creatinine (micromol/L)}}$$

(N=1.04 for females, N=1.23 for males)

Borderline cases (CrCl 60-70 mL/min): perform nuclear renogram for GFR, if available

Repeat every 21 days. Maximum prior to high dose chemotherapy and stem cell transplant, 3 cycles; otherwise 6 cycles. Discontinue if definite progression at any time.

DOSE MODIFICATIONS:

1. Hematological, day 1 only

ANC (x10 ⁹ /L)		Platelets (x10 ⁹ /L)	Dose (all drugs)
greater than or equal to 1	and	greater than or equal to 50	100%
less than 1	or	less than 50	Delay 1 week

2. Renal Dysfunction

Delay for one week if serum creatinine greater than 3 x ULN where ULN = local upper limit of normal range. If serum creatinine less than 3 x ULN adjust cisplatin dose as follows

Creatinine Clearance (ml/min)	Cisplatin dose	Gemcitabine dose
greater than or equal to 60	75 mg/m ² on Day 1	100%
45 - 59	37.5 mg/m ² on Days 1 and 8	100%
less than 45	Delay	Delay/Omit*

***Delay if day 1; if day 8, omit if serum creatinine greater than 3 x ULN where ULN = local upper limit of normal range.**

PRECAUTIONS:

1. **Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively.
2. **Thrombocytopenia:** Support with platelet transfusion may be required.
3. **Renal Toxicity:** Nephrotoxicity is common with cisplatin. Encourage oral hydration. Avoid nephrotoxic drugs such as aminoglycoside antibiotics. Irreversible renal failure associated with hemolytic uremic syndrome may occur (rare) with gemcitabine. Use caution with pre-existing renal dysfunction.
4. **Pulmonary Toxicity:** Acute shortness of breath may occur. Discontinue treatment if drug-induced pneumonitis is suspected.
5. **Hepatitis B Reactivation:** All lymphoma patients should be tested for both HBsAg and HBcoreAb. If either test is positive, such patients should be treated with Lamivudine 100 mg/day orally, for the entire duration of chemotherapy and for six months afterwards. Such patients should also be monitored with frequent liver function tests and hepatitis B virus DNA at least every two months. If the hepatitis B virus DNA level rises during this monitoring, management should be reviewed with an appropriate specialist with experience managing hepatitis and consideration given to halting chemotherapy.

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

Date activated: 01 Nov 2002

Date revised: 1 June 2011 (Infusion section revised)

References:

N/A