

BC Cancer Protocol Summary for Treatment of Relapsed Chronic Lymphocytic Leukemia (CLL) with Bendamustine

Protocol Code

LYCLLBEND

Tumour Group

Lymphoma

Contact Physician

Dr Laurie Sehn

ELIGIBILITY:

Patients must have:

- Relapsed or refractory chronic lymphocytic leukemia/small lymphocytic lymphoma and
- Advanced stage symptomatic disease requiring therapy

EXCLUSIONS:

Patients must not have:

- Hodgkin's lymphoma, diffuse large B-cell lymphoma, or
- 17p deletion (FISH testing for 17p deletion should be done prior to treatment initiation (if not previously done))

CAUTION:

- Creatinine clearance CrCl less than 40 mL/min
- AST or ALT greater than 2.5 x upper limit of normal and total bilirubin greater than 1.5 x upper limit of normal

TESTS:

- Baseline, then as indicated:
 - Required before first treatment: CBC & Diff, creatinine, ALT, total bilirubin
 - Required, but results do not have to be available to proceed with first treatment; results must be checked before proceeding with cycle 2: HBsAg, HBsAb, HBcoreAb
- Before day 1 of each treatment cycle: CBC & Diff
- If clinically indicated: creatinine, ALT, total bilirubin, HBV viral load (see protocol [SCHBV](#))

PREMEDICATIONS:

Antiemetic protocol for moderately emetogenic chemotherapy (see protocol SCNAUSEA)

SUPPORTIVE MEDICATIONS:

Moderate risk of hepatitis B reactivation. If HBsAg or HBcoreAb positive, follow hepatitis B prophylaxis as per [SCHBV](#).

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
bendamustine	70 mg/m ² * on days 1 and 2	IV in 250 to 500 mL NS over 1 hour

*May escalate dose to 100 mg/m² if tolerated.

Repeat every 28 days. Maximum 6 cycles. Discontinue if definite progression at any time.

DOSE MODIFICATIONS:

1. Hematological, day 1 only

ANC (x10 ⁹ /L)		Platelets (x10 ⁹ /L)	Bendamustine
greater than or equal to 1.0	and	greater than or equal to 75	100%
less than 1.0	or	less than 75	Delay until recovery

PRECAUTIONS:

- Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively.
- Thrombocytopenia:** Support with platelet transfusion may be required.
- Hepatitis B Reactivation:** See [SCHBV protocol for more details](#).
- Infusion Reactions and Hypersensitivity:** Bendamustine can cause allergic type reactions during the IV infusion such as fever, chills, pruritus and rash. Severe anaphylactic and anaphylactoid reactions have occurred rarely, particularly in the second and subsequent cycles of therapy. If an allergic reaction occurs, stop the infusion and the physician in charge should determine a safe time and rate to resume the infusion. Consider pre-treatment with antihistamines, antipyretics and corticosteroids for patients experiencing Grade 1 or 2 infusion reactions; consider discontinuing treatment for patients experiencing Grade 3 or 4 infusion reactions. See BC Cancer Hypersensitivity Guidelines.
- Tumour Lysis Syndrome:** Tumor lysis syndrome has been associated with bendamustine, possibly leading to acute renal failure and death. Usual onset occurs during the first cycle. Maintain adequate volume status and monitor blood chemistry, including potassium and uric acid levels. Allopurinol has been used, but the concomitant use of bendamustine and allopurinol can cause increased risk of severe skin toxicity.
- Drug Interactions:** CYP1A2 inhibitors can potentially decrease plasma concentration of bendamustine. CYP1A2 inducers can potentially increase plasma concentration of bendamustine.
- Skin Reactions:** Rash, toxic skin reactions and bullous exanthema have been reported. They may be progressive and increase in severity with further treatment. Monitor closely. If skin reactions are severe or progressive, consider withholding or discontinuing bendamustine.

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.

References:

1. Bergmann MA, Goebeler ME, Herold M, et al. Efficacy of bendamustine in patients with relapsed or refractory chronic lymphocytic leukemia: results of a phase I/II study of the German CLL Study Group. *Haematologica* 2005; 90: 1357-64.
2. Cheson BD, Wendtner CM, Pieper A, et al. Optimal use of bendamustine in chronic lymphocytic leukemia, non-Hodgkin lymphomas, and multiple myeloma: treatment recommendations from an international consensus panel. *Clin Lymphoma Myeloma Leuk* 2010;10:21-7.