

WALDENSTRÖM'S MACROGLOBULINEMIA/LYMPHOPLASMACYTIC LYMPHOMA TREATMENT REGIMENS

The selection, dosing, and administration of anticancer agents and the management of associated toxicities are complex. Drug dose modifications and schedule and initiation of supportive care interventions are often necessary because of expected toxicities and because of individual patient variability, prior treatment, and comorbidities. Thus, the optimal delivery of anticancer agents requires a healthcare delivery team experienced in the use of such agents and the management of associated toxicities in patients with cancer. The cancer treatment regimens below may include both FDA-approved and unapproved uses/regimens and are provided as references only to the latest treatment strategies. Clinicians must choose and verify treatment options based on the individual patient.

Primary Therapy—Non-stem Cell Toxic

Bortezomib (Velcade) ± rituximab (Rituxan)^{1,2}	Days 1, 8, and 15: Bortezomib 1.6mg/m ² IV. Day 1: Rituximab 375mg/m ² IV during Cycles 1 and 4 . Repeat every 28 days for 6 cycles.
Bortezomib + dexamethasone + rituximab^{1,3,4}	Days 1, 4, 8, and 11: Bortezomib 1.3mg/m ² IV + dexamethasone 40mg. Day 11: Rituximab 375mg/m ² IV. Repeat for 4 cycles, followed by 4 maintenance cycles starting 3 months after induction therapy and then every 3 months.
Rituximab^{1,5}	Day 1: Rituximab 375mg/m ² IV. Repeat every week for 4 weeks.
Rituximab + cyclophosphamide (Cytoxan) + prednisone^{1,6}	Day 1: Cyclophosphamide 750–1,000mg/m ² IV + vincristine 1.4mg/m ² IV (max dose 2mg). Day 1: Rituximab 375mg/m ² IV. Days 1–5: Prednisone 100mg/day orally.
Rituximab + cyclophosphamide + dexamethasone^{1,7}	Day 1: Dexamethasone 20mg IV, followed by rituximab 375mg/m ² IV. Days 1–5: Cyclophosphamide 100mg/m ² orally twice daily (max dose: 1,000mg/m ²). Repeat every 3 weeks for 6 months.
Thalidomide (Thalomid) ± rituximab^{1,8}	Thalidomide 200mg orally daily for 2 weeks, and then increased to 400mg orally daily for a total treatment period of 52 weeks. Day 1: Rituximab 375mg/m ² IV during Weeks 2–5 and Weeks 13–16 , for a total of 8 infusions.

Possible Stem-cell Toxicity and/or Risk of Transformation (or unknown)

Bendamustine (Treanda) ± rituximab^{1,9}	Days 1 and 2: Bendamustine 90mg/m ² IV. Day 1: Rituximab 375mg/m ² IV. Repeat cycle every 4 weeks for 4 cycles.
Chlorambucil (Leukeran)^{1,10}	Days 1–7: Chlorambucil 0.1–0.3mg/kg orally daily. Repeat every 6 weeks.
Cladribine (Leustatin) ± rituximab^{1,4}	Day 1: Rituximab 375mg/m ² IV. Days 1–5: Cladribine 0.1mg/kg SQ. Repeat every 4 weeks for 4 cycles.
Fludarabine (Fludara) ± rituximab^{1,11}	Day 1: Rituximab 375mg/m ² IV during Weeks 1–4, 17, 18, 30, and 31 . Days 1–5: Fludarabine 25mg/m ² IV daily during Weeks 5, 9, 13, 19, 23, and 27 (total 6 cycles).

References

- NCCN Clinical Practice Guidelines in Oncology™. Waldenström's Macroglobulinemia/Lymphoplasmacytic Lymphoma. v.1.2012. Available at: http://www.nccn.org/professionals/physician_gls/pdf/waldenstroms.pdf. Accessed May 29, 2012.
- Ghobrial IM, Xie W, Padmanabhan S, et al. Phase II trial of weekly bortezomib in combination with rituximab in untreated patients with Waldenström Macroglobulinemia. *Am J Hematol*. 2010;85:670–674.
- Treon SP, Ioakimidis L, Soumerai JD, et al. Primary therapy of Waldenström macroglobulinemia with bortezomib, dexamethasone, and rituximab. WMCTG clinical trial 05-180. *J Clin Oncol*. 2009;27:3830–3835.
- Dimopoulos MA, Gertz MA, Kastritis E, et al. Update on treatment recommendations from the Fourth International Workshop on Waldenström's Macroglobulinemia. *J Clin Oncol*. 2009;27:120–126.
- Dimopoulos MA, Zervas C, Zomas A, et al. Treatment of Waldenström's macroglobulinemia with rituximab. *J Clin Oncol*. 2002;20:2327–2333.
- Ioakimidis L, Patterson CJ, Hunter ZR, et al. Comparative outcomes following CP-R, CVP-R, and CHOP-R in Waldenström's macroglobulinemia. *Clin Lymphoma Myeloma*. 2009;9:62–66.
- Dimopoulos MA, Anagnostopoulos A, Kyrtonis MC, et al. Primary treatment of Waldenström's macroglobulinemia with dexamethasone, rituximab, and cyclophosphamide. *J Clin Oncol*. 2007;25:3344–3349.
- Treon SP, Soumerai JD, Branagan AR, et al. Thalidomide and rituximab in Waldenström macroglobulinemia. *Blood*. 2008;112:4452–4457.
- Cheson BD, Rummel MJ. Bendamustine: rebirth of an old drug. *J Clin Oncol*. 2009;27:1492–1501.
- Kyle RA, Greipp PR, Gertz MA, et al. Waldenström's macroglobulinemia: a prospective study comparing daily with intermittent oral chlorambucil. *Br J Haematol*. 2000;108:737–742.
- Treon SP, Branagan AR, Ioakimidis L, et al. Long-term outcomes to fludarabine and rituximab in Waldenström's macroglobulinemia. *Blood*. 2009;113:3673–3678.