

Low-grade Lymphoproliferative Disorders (CLL, HCL, T-PLL) – Adult¹

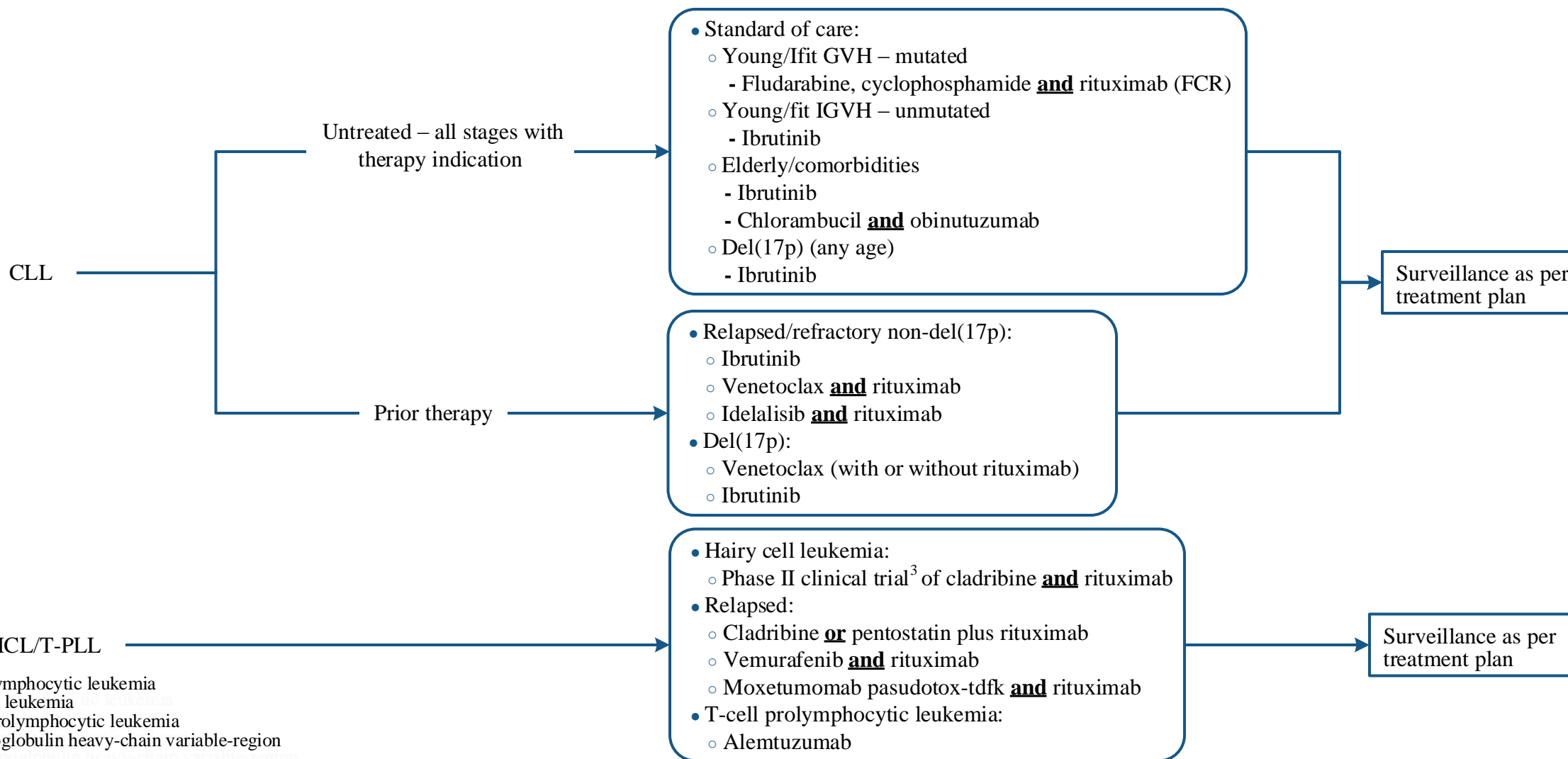
Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

Note: Consider Clinical Trials as treatment options for eligible patients. Leukemia patients should be referred and treated at a comprehensive cancer center.

PATIENT PRESENTATION²

TREATMENT

SURVEILLANCE



CLL = chronic lymphocytic leukemia
 HCL = hairy cell leukemia
 T-PLL = t-cell prolymphocytic leukemia
 IGVH = immunoglobulin heavy-chain variable-region

¹ Greater than or equal to 18 years old

² See [Physical Activity](#), [Nutrition](#), and [Tobacco Cessation](#) algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

³ Leukemia Newsletter: <http://www.mdanderson.org/leukemia>

Low-grade Lymphoproliferative Disorders (CLL, HCL, T-PLL) – Adult

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

SUGGESTED READINGS

- Burger, J., Tedeschi, A., Barr, P., Robak, T., Owen, C., Ghia, P., ... Kipps, T. (2015). Ibrutinib as Initial Therapy for Patients with Chronic Lymphocytic Leukemia. *The New England Journal of Medicine*, 373(25), 2425–2437. <https://doi.org/10.1056/NEJMoa1509388>
- Byrd, J., Brown, J., O'Brien, S., Barrientos, J., Kay, N., Reddy, N., ... Hillmen, P. (2014). Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia. *The New England Journal of Medicine*, 371(3), 213–223. <https://doi.org/10.1056/NEJMoa1400376>
- Byrd, J., Furman, R., Coutre, S., Burger, J., Blum, K., Coleman, M., ... O'Brien, S. (2015). Three-year follow-up of treatment-naïve and previously treated patients with CLL and SLL receiving single-agent ibrutinib. *Blood*, 125(16), 2497–2506. <https://doi.org/10.1182/blood-2014-10-606038>
- Byrd, J., Furman, R., Coutre, S., Flinn, I., Burger, J., Blum, K., ... O'Brien, S. (2013). Targeting BTK with Ibrutinib in Relapsed Chronic Lymphocytic Leukemia. *The New England Journal of Medicine*, 369(1), 32–42. <https://doi.org/10.1056/NEJMoa1215637>
- Furman, R., Sharman, J., Coutre, S., Cheson, B., Pagel, J., Hillmen, P., ... O'Brien, S. (2014). Idelalisib and Rituximab in Relapsed Chronic Lymphocytic Leukemia. *The New England Journal of Medicine*, 370(11), 997–1007. <https://doi.org/10.1056/NEJMoa1315226>
- Goede, V., Fischer, K., Busch, R., Engelke, A., Eichhorst, B., Wendtner, C., ... Hallek, M. (2014). Obinutuzumab plus Chlorambucil in Patients with CLL and Coexisting Conditions. *The New England Journal of Medicine*, 370(12), 1101–1110. <https://doi.org/10.1056/NEJMoa1313984>
- Goede, V., Fischer, K., Engelke, A., Schlag, R., Lepretre, S., Montero, L., ... Hallek, M. (2015). Obinutuzumab as frontline treatment of chronic lymphocytic leukemia: Updated results of the CLL11 study.(Letters to the Editors)(Letter to the editor). *Leukemia*, 29(7), 1602–1604. <https://doi.org/10.1038/leu.2015.14>
- Hallek, M., Fischer, K., Fingerle-Rowson, G., Fink, A., Busch, R., Mayer, J., ... Stilgenbauer, S. (2010). Addition of rituximab to fludarabine and cyclophosphamide in patients with chronic lymphocytic leukaemia: A randomised, open-label, phase 3 trial. *The Lancet*, 376(9747), 1164–1174. [https://doi.org/10.1016/S0140-6736\(10\)61381-5](https://doi.org/10.1016/S0140-6736(10)61381-5)
- National Comprehensive Cancer Network. (2018). *Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma* (NCCN Guideline Version 5.2018). https://www.nccn.org/professionals/physician_gls/pdf/cll.pdf.
- Seymour, J., Kipps, T., Eichhorst, B., Hillmen, P., D'Rozario, J., Assouline, S., ... Kater, A. (2018). Venetoclax–Rituximab in Relapsed or Refractory Chronic Lymphocytic Leukemia. *The New England Journal of Medicine*, 378(12), 1107–1120. <https://doi.org/10.1056/NEJMoa1713976>
- Stilgenbauer, S., Eichhorst, B., Schetelig, J., Coutre, S., Seymour, J., Munir, T., ... Wierda, W. (2016). Venetoclax in relapsed or refractory chronic lymphocytic leukaemia with 17p deletion: A multicentre, open-label, phase 2 study. *The Lancet Oncology*, 17(6), 768–778. [https://doi.org/10.1016/S1470-2045\(16\)30019-5](https://doi.org/10.1016/S1470-2045(16)30019-5)

Low-grade Lymphoproliferative Disorders (CLL, HCL, T-PLL) – Adult

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

DEVELOPMENT CREDITS

This practice algorithm is based on majority expert opinion of the Leukemia Center Faculty workgroup at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

Yesid Alvarado, MD (Leukemia)
Michael Andreeff, PhD, MD (Leukemia)
Christopher Benton, MD (Leukemia)
Kapil Bhalla, MD (Leukemia)
Gautam Borthakur, MBBS (Leukemia)
Prithviraj Bose, MD (Leukemia)
Jan Burger, MD (Leukemia)
Jorge Cortes, MD (Leukemia)
Naval Daver, MD (Leukemia)
Courtney DiNardo, MD (Leukemia)
Zeev Estrov, MD (Leukemia)
Alessandra Ferrajoli, MD (Leukemia)[‡]
Emil Freireich, MD (Leukemia)
Wendy Garcia, BS[♦]
Guillermo Garcia-Manero, MD (Leukemia)
Ghayas Issa, MD (Leukemia)
Elias Jabbour, MD (Leukemia)
Nitin Jain, MBBS (Leukemia)
Tapan Kadia, MD (Leukemia)

Hagop M. Kantarjian, MD (Leukemia)[‡]
Michael Keating, MD (Leukemia)
Marina Konopleva, MD (Leukemia)
Steven Kornblau, MD (Leukemia)
Lucia Masarova, MD (Leukemia)
Guillermo Montalban-Bravo, MD (Leukemia)
Kiran Naqvi, MD (Leukemia)
Maro Ohanian, DO (Leukemia)
Naveen Pemmaraju, MD (Leukemia)
Farhad Ravandi-Kashani, MD (Leukemia)
Michael Rytting, MD (Pediatrics)
Koji Sasaki, MD (Leukemia)
Nicholas Short, MD (Leukemia)
Koichi Takahashi, MD (Leukemia)
Philip Thompson, MBBS (Leukemia)
Srdan Verstovsek, MD (Leukemia)
William Wierda, MD (Leukemia)[‡]
Sonal Yang, PharmD[♦]
Musa Yilmaz, MD (Leukemia)

[‡] Core Development Leads

[♦] Clinical Effectiveness Development Team