Programmed apoptotic cell death is critical to maintain tissue homeostasis and cellular integrity in the lymphatic system. Accordingly, the evasion of apoptosis is a critical milestone for the transformation of lymphocytes on their way to becoming overt lymphomas. The anti-apoptotic BCL-2 family proteins are pivotal regulators of the mitochondrial apoptotic pathway and genetic aberrations in these genes are associated with lymphomagenesis and chemotherapeutic resistance. Pharmacological targeting of BCL-2 is highly effective in certain indolent B-cell lymphomas; however, recent evidence highlights a critical role for the BCL-2 family member MCL-1 in several lymphoma subtypes. MCL-1 is recurrently highly expressed in various kinds of cancer including non-Hodgkin’s lymphoma of B- and T-cell origin. Moreover, both indolent and aggressive forms of lymphoma require MCL-1 for lymphomagenesis and for their continued survival. This review summarizes the role of MCL-1 in B- and T-cell lymphoma and discusses its potential as a therapeutic target.