Indolent lymphoma is one of the most frequently occurring subtypes of non-Hodgkin lymphoma (NHL). Indolent NHL has a long natural history, and patients will likely receive multiple therapies during the course of their disease. Treatment options are rapidly evolving and, because oncology nurses play a major role in managing patients undergoing treatment for indolent NHL, they need to be aware of the potential adverse effects associated with new therapies that may affect patients in their care. One such agent is bendamustine, which was approved by the U.S. Food and Drug Administration in 2008 for the treatment of relapsed indolent NHL. Oncology nurses are increasingly likely to encounter bendamustine either as monotherapy or in combination with rituximab. Bendamustine is a hybrid agent with both alkylating and purine analog properties, produces a high response rate in patients with indolent NHL, and has manageable side effects that include immunosuppression, gastrointestinal toxicity, and fatigue. Oncology nurses should be familiar with the common side effects so as to provide enhanced care for the patient receiving this agent. This article reviews the safety profile of bendamustine and discusses the implications from a nursing perspective.