Brentuximab Vedotin

A nursing perspective on best practices and management of associated adverse events

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BACKGROUND: Brentuximab vedotin (BV) is an antibody–drug conjugate that targets CD30-expressing cells.

OBJECTIVES: This article assesses the occurrence and management of the most frequent and clinically relevant BV-associated adverse events (AEs), with a focus on Hodgkin lymphoma and systemic anaplastic large cell lymphoma trials, and shares practical tips that may help decrease occurrence and severity.

METHODS: Peer-reviewed literature was surveyed to collect safety data from sponsored clinical trials of BV and to compile associated management guidelines.

FINDINGS: Peripheral neuropathy was the most common BV-associated AE across clinical trials. Other clinically relevant AEs included neutropenia, infection, and infusion-related reactions. Awareness of and preparedness for these common BV-associated AEs and other less common but significant AEs will help nurse clinicians and patients maximize the clinical benefit for patients receiving BV.

KEYWORDS
brentuximab vedotin; adverse events; peripheral neuropathy; management

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HODGKIN LYMPHOMA (HL) IS A RARE B-CELL MALIGNANCY that originates in lymphocytes (Ansell, 2016). There are two distinct forms of HL: the more common classical HL, accounting for 95% of cases, and the rare nodular lymphocytic predominant HL, accounting for 5% of cases (Ansell, 2016; National Comprehensive Cancer Network, 2018a). Although the cause of and risk factors for the development of HL remain unknown, people with HIV and/or Epstein-Barr virus are at increased risk of developing HL (Ansell, 2016; Shiels et al., 2014), as well as patients with active autoimmune disorders (Hollander et al., 2015). HL is one of the most frequently diagnosed cancers in adolescents and young adults and is also seen in people older than age 55 years; it is more common among men than women (National Cancer Institute, 2018). Of note, 86% of patients with HL go on to survive five years; even with this high survival rate, about 5%–10% of patients with HL are refractory to initial treatment and 10%–30% of patients will relapse after achieving an initial complete remission (Ansell, 2016).

Systemic anaplastic large cell lymphoma (sALCL) is an even less common, but aggressive, T-cell–type non-Hodgkin lymphoma. From 1992–2001, it was known to affect 864 people per year in the United States, with an estimated five-year relative survival rate of about 55% (Macalalad et al., 2015; Morton et al., 2006). Like HL, sALCL also has a bimodal age distribution, occurring in young and older adults, and affects men 1.3–2 times more frequently than women (Macalalad et al., 2015; Morton et al., 2006). Patients' response rate to first-line treatment, typically chemotherapy, is about 80%, but 36%–60% of patients will develop recurrent disease following initial treatment. In addition, patients with anaplastic lymphoma kinase (*ALK*)–positive sALCL, resulting from a chromosomal translocation involving the *ALK* gene and leading to increased expression of *ALK*, tend to have improved outcomes with a five-year survival rate of 93% compared with patients who do not express the *ALK* translocation (*ALK*-negative patients), who have only a 37% five-year survival rate (Gascoyne et al., 1999).

Common to both of these malignancies is the expression of CD30, a transmembrane cytokine receptor on malignant cells for both neoplasms (Macalalad et al., 2015). Because of its high expression on malignant cells,