## Diarrhea in Multiple Myeloma: A Review of the Literature

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with multiple myeloma (MM) experience as a result of cancer treatment is diarrhea. Diarrhea in patients with MM often is severe enough to warrant dose reduction, delays, or discontinuation of chemotherapy. Short-term diarrhea can occur as a side effect of drugs, such as bortezomib (Velcade<sup>®</sup>) or panobinostat (Farydak<sup>®</sup>). Late-onset diarrhea from lenalidomide (Revlimid<sup>®</sup>) can occur 17–24 months after the start of therapy. Treatment of diarrhea is often by dose reduction

Background: One of the most common and inadequately managed symptoms that patients

and discontinuation of the offending drug. However, the symptom fails to entirely resolve with these interventions and dose reductions place the individual at risk for disease progression. Best practices for diarrhea management in MM are poorly understood, but diarrhea symptoms impede patient adherence and undermine quality of life.

**Objectives:** The purpose of this article is to review the etiology of the symptom of diarrhea in people with cancer, specifically MM. Management strategies also are discussed.

**Methods:** A comprehensive review of CINAHL<sup>®</sup>, MEDLINE<sup>®</sup>, and PubMed databases was performed using the search terms *diarrhea, chemotherapy, multiple myeloma*, and *cancer*. Research studies, guidelines, and papers from peer-reviewed publications were considered.

**Findings:** Although general guidelines from the American Society of Clinical Oncology and Oncology Nursing Society exist that suggest best practices in the management of chemotherapy-induced diarrhea, best practices to identify and manage diarrhea symptoms in patients with MM are lacking.

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iarrhea is an often neglected and undertreated source of symptom distress in patients with multiple myeloma (MM) (Hoff et al., 2014; Muehlbauer et al., 2009). Reasons for diarrhea are multifactorial and can be related to chemotherapy, a weakened immune system, medications, nutritional supplements, psychological stress, infection, graft-versus-host disease (GVHD), or the cancer itself (Benson et al., 2004). Best practices in the management of diarrhea in patients with MM are conspicuously absent, but ineffective diarrhea management can lead to altered physiologic and psychological processes.

Physiologic consequences of mild diarrhea include electrolyte abnormalities, malabsorption of oral medications, and impaired nutritional status, and more severe symptoms can cause death (Benson et al., 2004; Hoff et al., 2014; Maroun et al., 2007; Muehlbauer et al., 2009; Sun, Wang, & Hu, 2012). Psychological consequences include social isolation, low self-esteem, anxiety, and hopelessness (Smith, Bertolotti, Curran, & Jenkins, 2008). Ineffective management of diarrhea not only leads to poor clinical outcomes, but also has a negative impact on quality of life, including alteration of roles, responsibilities, and interpersonal relationships, and may cause social isolation (Muehlbauer et al., 2009).