

## FEATURE ARTICLE

# Advances in Oral Therapy in the Treatment of Multiple Myeloma

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Conventional IV chemotherapy regimens used for induction chemotherapy or salvage therapy in the treatment of multiple myeloma (MM) are cumbersome, with a negative impact on patient quality of life. A number of new oral drugs, including immunomodulatory agents such as thalidomide and lenalidomide, have demonstrated potent antimyeloma activity in relapsed and refractory as well as newly diagnosed MM. Clinically, response rates of 56%–72% have been reported with the combination of thalidomide and dexamethasone in patients with newly diagnosed disease; however, the combination is associated with a higher incidence of side effects, including constipation, somnolence, peripheral neuropathy, and thromboembolic complications. In contrast, preliminary safety and efficacy data from clinical studies of lenalidomide show promise. Response rates as high as 83% have been reported in patients with newly diagnosed MM, and the most common adverse event is manageable myelosuppression, which is reversible with dose reduction. Lenalidomide has different toxicities than thalidomide, exhibiting greater myelosuppression but virtually no constipation, somnolence, or peripheral neuropathy. Oncology nurses play a key role in monitoring patients for side effects and pain control and educating them about emerging treatment options. This article reviews the nursing experience with oral agents in the treatment of MM.

**M**ultiple myeloma (MM) is the second most common hematologic malignancy in the United States and accounts for an estimated 14% of all newly diagnosed hematologic malignancies (American Cancer Society, 2005). Standard therapy has included melphalan and prednisone; vincristine, doxorubicin, and dexamethasone (VAD); or single-agent dexamethasone (Kyle & Rajkumar, 2004). Although the response rate with VAD as initial therapy is slightly better than that with melphalan and prednisone (Myeloma Trialists' Collaborative Group, 1998), VAD appears to offer no survival advantage over melphalan and prednisone. In addition, IV combination chemotherapy regimens have several disadvantages, including the need to establish a central venous catheter, risk of catheter-related infections, and potential cardiac toxicity (Alexanian, Barlogie, & Tucker, 1990; Hideshima & Anderson, 2002).

Some of the newer agents, such as proteasome inhibitor bortezomib, require IV administration (Munshi, 2004). Others, including thalidomide, lenalidomide, specific inhibitors of farnesyl transferase, histone deacetylase, and vascular endothelial growth factor (VEGF), are administered orally. The oral agents have demonstrated potent activity in MM in vitro (Harousseau, Shaughnessy, & Richardson, 2004; Munshi) and potent in vivo antimyeloma activity in all categories of MM. However, the oral agents' distinctive tolerability profiles may impact their use in different patient populations. This article will discuss clinical experiences and nursing implications of oral agents in the treatment of MM.

### At a Glance

- ◆ Oral agents such as thalidomide and lenalidomide represent a new treatment paradigm for multiple myeloma and provide alternatives to IV agents.
- ◆ Given the choice, most patients with cancer prefer oral therapy.
- ◆ Nurses have an important role in identifying patients who may be good candidates for oral therapy, monitoring compliance, and managing side effects.

## Oral Therapy for Multiple Myeloma Single-Agent Dexamethasone

Dexamethasone has significant single-agent activity in MM and induces rapid responses in patients with previously untreated

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