Adherence to Cancer Therapies: Are Your Patients Taking Their Prescriptions as Ordered?

by PAMELA HALLQUIST VIALE, RN, MS, CS, ANP, AOCNP®

Patients receiving prescription medications for chronic medical conditions are not always adherent to their treatment protocols. In a recent study by Yeaw, Benner, Walt, Sian, and Smith (2009), the adherence pattern for a sample of six chronic therapies revealed variable but persistent suboptimal medication use in a large study of 167,907 patients. The medications studied were for therapies for chronic conditions (including cardiovascular), oral antidiabetic agents, and oral medications prescribed for osteoporosis; the 12-month adherence rate for statins was 61%, oral antidiabetic medications 72%, and bisphosphonates 60% (Yeaw et al., 2009). This lack of adherence and persistence to ordered therapy has the potential to affect patient outcomes.

Advanced practitioners working in oncology might assume that the gravity of a disease like cancer would inspire patients to be more adherent to their prescribed treatment regimens; however, research has shown us differently (Partridge et al., 2010). Patients with optimal adherence take their medications exactly as prescribed by their providers (Ruddy, Mayer, & Partridge, 2009). This means no missed doses, extra doses, or taking of an inappropriate quantity of medication prescribed. Overadherence can be a significant issue, particularly with agents that have a narrow therapeutic index.

Many supportive care drugs used in oncology are also administered orally. In my own practice, I remember a patient who de-

scribed a week of uncontrolled vomiting after her chemotherapy treatment. When queried regarding the effectiveness of her oral antiemetic prescription, she reported that after being confronted with a bill for over $1,000 that she was unable to pay, she suffered instead with the symptoms of nausea and vomiting. Although parenterally administered therapies can increase adherence, patients with cancer are receiving increasing numbers of oral therapies. Presently, more than 20 oral antineoplastic agents are approved for use in the United States, with more under study (Ruddy et al., 2009).

The benefits of oral therapies are many and allow patients to take their medications at home, avoiding a trip to the clinic for intravenous administration of chemotherapy treatments. But if patients don't take their medications as ordered, the effectiveness of the therapy can be compromised. Studies have shown that patients taking tamoxifen or oral aromatase-inhibitor therapies can be nonadherent with their medications. The rate of adherence can drop in the first year, with 50% adherence noted after 12 months in specific studies (Partridge et al., 2010; Ziller et al., 2009; Partridge, Wang, Winer, & Avorn, 2003). And in some cases, patients may be nonadherent with the original filling of prescribed medication, particularly if insurance coverage is lacking and cost is an issue (Ruddy et al., 2009).

Author Susan Moore discusses common barriers to adherence and persistence with oral cancer therapies in the third issue of the *Journal of the Advanced Practitioner in Oncology (JAdPrO)*. She defines models for change and highlights the role of the AP as a leader and change agent in confronting this important issue. With new oral therapies expected to expand in number, APs need to address the issue of nonadherence to cancer therapies and to participate in strategies to improve persistence to oral agents.

Other articles in this issue discuss additional topics essential to AP practice. Author Amy Goodrich gives us an overview of the advances in treatment of chronic myelogenous leukemia (CML). We continue our biomarker series with a thorough review by author Sandy Kurtin on the laboratory measures and markers used in the treatment of patients with multiple myeloma. This issue's *Prescriber's Corner* features a review by Brant and colleagues on methadone, a useful agent for patients with cancer and one that requires care in prescribing and monitoring. *Grand Rounds* describes a case study of a patient with cancer and diabetes, illustrating the challenge of treating patients with comorbidities. *Tools and Technology* reviews useful information for users of mobile technology, which is increasingly important in today's clinical world. And our *Translating Research into Practice (TRIP)* feature continues our goal of making research more applicable to practice for the AP by discussing the importance of understanding the levels of evidence used to determine validity of data.

We hope that the topics in this issue help you, the AP, in the care of your oncology patients. We encourage you to tell us additional issues and topics you would find interesting and subjects you'd like to see addressed in this journal. And as always, we invite potential authors to consider publishing your work in *JAdPrO*!

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