

# A Structured Nursing Intervention to Address Oral Chemotherapy Adherence in Patients With Non-Small Cell Lung Cancer

Jean Boucher, PhD, RN, ANP, Joan Lucca, RN, MSN, NP-C, AOCN®, Catherine Hooper, RN, BSN, OCN®, Lillian Pedulla, RN, BSN, MSN, NEA-BC, and Donna L. Berry, PhD, RN, AOCN®, FAAN

**W**ith the use of oral chemotherapies rapidly expanding in oncology practice (Halfdanarson & Jatoi, 2010), an increasingly significant concern involves patient medication adherence when these oral agents are self-administered at home (Given, 2009; Moore, 2007, World Health Organization, 2003). One challenge of oral chemotherapy is the rate of medication adherence to oral anticancer regimens, which varies widely from 16%–100% in adults (Ruddy, Mayer, & Partridge, 2009). Common patient problems related to oral chemotherapy adherence include improper administration, inadequate monitoring, and adverse side effects (Banning, 2009; Decker et al., 2009; Given, Spoelstra, & Grant, 2011; Goodin, 2007; Halfdanarson & Jatoi, 2010; Hartigan, 2003; Haynes, Ackloo, Sahota, McDonald, & Yao, 2008; Moore, 2007; Ruddy et al., 2009). Suboptimal or improper self-administration reduces treatment efficacy and increases toxicity (Hartigan, 2003; Maloney & Kagan, 2011; Partridge, Avorn, Wang, & Winer, 2002; Ruddy et al., 2009; Wood, 2012) and leads to treatment delays, changes in treatment, and premature death (Given et al., 2011). Patient self-administration of oral chemotherapy also increases the risk of errors and changes the way patients are monitored (Goodin, Aisner, Bartel, & Viele, 2007; Goodin et al., 2011). Older adults with cancer have additional adherence and safety risks because of age-related physical changes, comorbid conditions, polypharmacy, and drug interactions (Maloney & Kagan, 2011).

As reported by Weingart et al. (2008), significant patient safety concerns exist related to medication adherence, including safe handling (Goodin et al., 2011) and how patients manage missed doses and adverse events. To address these concerns, guidelines were published by the American Society of Clinical Oncology and the Oncology Nursing Society (Neuss et al., 2013; Weingart et al., 2012) to standardize the approach to oral

**Purpose/Objectives:** To evaluate a nurse-led intervention to enhance medication knowledge and adherence using the Multinational Association for Supportive Care in Cancer Oral Agent Teaching Tool (MOATT).

**Design:** Longitudinal, descriptive feasibility study.

**Setting:** An ambulatory thoracic oncology disease center located at the Dana-Farber Cancer Institute in Boston, MA.

**Sample:** 30 adult patients with lung cancer who received the oral agent erlotinib.

**Methods:** Structured, nurse-led education sessions using the MOATT were provided, with a 72-hour follow-up telephone contact. Participants completed a Knowledge Rating Scale (KRS) and adapted Morisky Medication Adherence Scale–8 (MMAS-8) at the end of the first cycle of oral chemotherapy.

**Main Research Variables:** Knowledge and adherence; feasibility.

**Findings:** Twenty-seven participants completed the study outcome measures reporting high knowledge levels and MMAS-8 scores. Structured, nurse-led education and follow-up monitoring sessions ranged from 14–30 minutes. Several participants also initiated contact for assistance with prescription procurement and symptom management. Participants reported a median of two side effects.

**Conclusions:** The structured, nurse-led teaching, using the MOATT tool, and follow-up nurse contacts were feasible as integrated into the thoracic oncology setting. Adherence and knowledge outcomes were encouraging. Additional studies should include objective adherence measures and strategies for delivering supportive care to patients at home.

**Implications for Nursing:** Structured teaching with patients is important to enhance proper oral anticancer medication knowledge and adherence, including follow-up monitoring of administration and side effects at 72 hours.

**Key Words:** lung cancer; oral chemotherapy; adherence; knowledge; oncology nursing

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chemotherapy administration by educating healthcare providers. Patients require similar education and support, including monitoring of medication procurement