

# Assessment and Measurement of Medication Adherence: Oral Agents for Cancer

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**Background:** Clinicians are challenged to find ways to assess and measure adherence to oral agents for cancer (OACs).

**Objectives:** The purpose of this article is to report on available ways to assess and measure medication adherence by patients with cancer.

**Methods:** Tools examined include the Morisky Medication Adherence Scale (MMAS) and the Adherence Estimator, which are able to predict risk of nonadherence. Adherence Starts With Knowledge (ASK®)-12 and the Brief Adherence Rating Scale (BARS) are likely to be effective for predicting nonadherence and measuring adherence rates.

**Findings:** Additional research needs to focus on the testing of reliable and valid tools that are sensitive and specific to patients with cancer who are prescribed OACs. The authors found that the MMAS and Adherence Estimator tools may be useful at predicting risk of medication nonadherence, and the ASK-12 and BARS may be useful for measuring rates of adherence. Tools could be modified to a specific clinical setting and used in a standardized format so that nurses can assess risk of medication nonadherence and measure adherence rates of OACs.

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Despite efforts by clinicians and pharmaceutical manufacturers to encourage adherence to oral agents for cancer (OACs), adherence rates are suboptimal (Bassan et al., 2014; Streeter, Schwartzberg, Husain, & Johnsrud, 2011). Evidence suggests that adherence to OACs is a significant clinical problem that may affect treatment success (Bozic et al., 2013; Gebbia, Bellavia, Ferrau, & Valerio, 2012; Mitchell, Porter, & Manias, 2014; Puts et al., 2013). This article will report on methods to assess and measure medication adherence by patients with cancer to inform clinical practice.

## Defining Medication Adherence

*Adherence* needs to be defined prior to assessment and measurement. For the current review, the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) definition was used: the degree or extent of conformity to the

recommendations about day-to-day treatment by the provider with respect to the timing, dosage, and frequency for the duration of time from initiation to discontinuation of therapy (Cramer et al., 2008).

This allows *underadherence*—taking less medication than prescribed (e.g., missing a daily dose, not starting a cycled drug on the day prescribed)—and *overadherence*—taking more medication than prescribed (e.g., doubling up on doses on the day after a missed dose, taking more pills than prescribed, taking the medication when off cycle) or taking doses too close together—to be examined. ISPOR's definition of adherence provides a means to assess and measure all dimensions of treatment with OACs.

## Maintaining Therapeutic Dosing

The U.S. Food and Drug Administration (2014) guidelines provide a therapeutic OAC dosage to be prescribed for each