



Adherence to oral chemotherapy: a study on dasatinib

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BACKGROUND

- Texas Oncology is a privately owned company that provides intravenous and oral chemotherapy for cancer patients in 150 locations across Texas and Oklahoma. Dasatinib is one oral chemotherapy agent that is indicated for the treatment of chronic myelogenous leukemia (CML) and acute lymphoblastic leukemia (ALL).
- Studies of another BCR-ABL Tyrosine Kinase Inhibitor (TKI), imatinib, showed a correlation between lower rates of adherence and a lesser cytogenetic and treatment response. Such data offer a scientific basis for the necessity of 100% adherence in patients taking this class of medications.¹
- In a 2014 review article examining studies that measured the importance of adherence to BCR-ABL TKIs, the Medication Possession Ratio (MPR) was the most frequently used measurement of adherence in retrospective studies.²
- The MPR is a function of the following equation:³

$$MPR = \frac{\text{Total days of supply}}{\text{Date of last fill} - \text{date of first fill} + \text{days of supply of last fill}}$$

OBJECTIVE

- The purpose of the study was to determine adherence using the Medication Possession Ratio (MPR) for patients who filled dasatinib prescriptions at any Texas Oncology Pharmacy during the study period.

STUDY DESIGN & OUTCOME MEASURES

- This study was a retrospective chart review of patients who filled a prescription for dasatinib at any Texas Oncology pharmacy between January 1, 2013 and September 11, 2015.
- Primary outcome measure
 - Determine the Medication Possession Ratio (MPR) for the dasatinib regimens of patients who filled their prescriptions with Texas Oncology.

METHODS

Exclusion criteria:

- Patients who filled only one prescription for dasatinib
- If there is a gap in fills >30 days past the date the patient would have used the full days' supply of the most recent prescription fill assuming complete adherence, and:
 - The chart does not clearly cite noncompliance or list an excusable reason for this gap; or
 - An excusable reason for this gap is apparent, but data in the patient's chart is insufficient to accurately adjust the dates to account for this gap.

Data collection:

- Pharmacy software was used to generate a report of patients who filled dasatinib at any Texas Oncology pharmacy from January 1, 2013 to September 11, 2015.
- Patients' charts were individually reviewed to determine if gaps in adherence could be explained by legitimate medical, social or economic barriers to compliance.

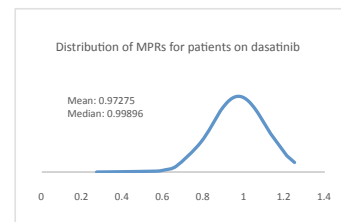
Data analysis:

- The MPR was calculated for eligible patients using this data, and the bell-curve distribution was graphed.

Table 1: Baseline Characteristics

Characteristics	Statistics N = 72
Age (Mean (SD) in years)	57.31 (17.64)
Gender	N (%)
Male	31 (43.1)
Female	41 (56.9)
Race/Ethnicity	
White, Caucasian	65 (90.3)
Black, African American	5 (6.9)
Asian, Korean	1 (1.4)
Unknown	1 (1.4)

Figure 1: Results



RESULTS

- In general, Texas Oncology patients taking dasatinib were found to be highly compliant, with a mean MPR of 0.97275 and a median MPR of 0.99896.

CONCLUSION

- The mean MPR is lower than the median. This slight left-skew to the bell-curve indicates that most patients' MPRs were on the higher side of the range, and a few outliers with low values decreased the average value.
- The presence of MPRs exceeding 1 indicates patients' filling of their prescription before using their complete days' supply on one or several occasions.
- Exclusion of patients not clearly identified as noncompliant in their chart selected for more compliant patients. The reason for gaps in therapy was frequently not documented in patients' charts.

DISCLOSURES

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

Katherine Lutek: Nothing to disclose
Jim Schwartz: Director of Pharmacy Services – Texas Oncology
Neal Dave: Pharmacy Area Manager – Texas Oncology
Kenneth A. Lawson: Nothing to disclose

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