Impact of out-of-pocket costs on time to initiate oral chemotherapy

Katie Lentz, PharmD; Russell Moore, PharmD, BCOP; Yousuf Zafar, MD; Meredith Moorman, PharmD, BCOP, CPP
Duke University Hospital; Durham, North Carolina

Background

- As of July 2015, 40 states had enacted oral chemotherapy parity laws limiting the out-of-pocket costs that patients would be required to contribute to purchase oral chemotherapy drugs.1 To support these laws, legislators have referenced many pharmacoeconomic studies assessing the cost of oral chemotherapy, comparing costs of oral and intravenous chemotherapy, and studying the rate of treatment abandonment in patients with high out-of-pocket costs for oral chemotherapy:2-4

- While these studies have been the main sources of support for oral chemotherapy parity laws across the country, there are few, if any, studies assessing whether or not high out-of-pocket costs influence the time to initiate oral chemotherapy.

- This study aims to determine the relative time to initiate therapy in patients receiving oral chemotherapy, the impact that cost has on this time period, and if a difference in disease progression exists based on the time to initiate treatment.

Objectives

Primary Objective

- To determine if the out-of-pocket cost of oral chemotherapy influences the time it takes to initiate first-line oral chemotherapy in cancer patients

Secondary Objectives

- To determine:
  - If the out-of-pocket cost of oral chemotherapy influences the time it takes to initiate treatment in the overall study population
  - If the out-of-pocket cost of oral chemotherapy influences the time it takes to initiate second-line treatment in cancer patients
  - If the out-of-pocket cost influences the time to initiate first-line oral chemotherapy when adjusted for pre-determined variables
  - The time to disease progression when patients are stratified by time to initiate therapy for first-line oral chemotherapy
  - Whether or not patient assistance was received when patients are stratified by type of prescription insurance (public (Medicare/Medicaid), private/commercial, none)

Methods

Study Design

- IRB approved, retrospective, single center study of subjects identified by the Duke Health Technology Solutions Information Management and Enterprise Reporting Team
- Retrospective chart review conducted through both the electronic medical record and the retail pharmacy dispensing system

Table 1: Inclusion and Exclusion Criteria

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
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<tbody>
<tr>
<td>≥ 18 years of age</td>
<td>Patients receiving active treatment for multiple cancer types</td>
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<tr>
<td>Followed by a provider at Duke University Hospital</td>
<td>Patients receiving repeat treatment with any of the included medications</td>
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<tr>
<td>Filled oral chemotherapy prescription at Duke Cancer Center Specialty Pharmacy</td>
<td>Patients already enrolled in a patient assistance program for an included medication</td>
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<tr>
<td>Initiated on a specified therapy for a specified malignancy between June 22, 2013 and January 1, 2015*</td>
<td>Patients already enrolled in a pharmaceutical company’s patient assistance program for selected medications</td>
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*Prostate cancer - abiraterone or enzalutamide, Kidney cancer - sunitinib, pazopanib, axitinib or everolimus, Breast cancer - palbociclib, esmolol, tumor necrosis factor inhibitors, Lung cancer - erlotinib, afatinib or crizotinib, Gastrointestinal Stomal Tumor – imatinib, sunitinib or regorafenib, Colon cancer - regorafenib, Soft tissue sarcoma - pazopanib

Primary endpoint

- Time to initiate treatment in patients beginning first-line oral chemotherapy

Secondary endpoints

- Time to initiate treatment in the overall study population (those receiving first or second line oral chemotherapy)
- Time to initiate second-line treatment
- Time to initiate first-line oral chemotherapy in patients categorized by out-of-pocket cost and adjusted for pre-determined variables
- The time to disease progression, as defined by the RECIST criteria and/or documentation of clinical progression in the patient’s chart, when patients are stratified by time to initiate first-line oral chemotherapy
- Receipt of patient assistance when stratified by type of insurance (Public (Medicare/Medicaid), Private/commercial, None)

Data Collection and Analysis

Data Collection

For included subjects, the following data will be collected:

- Date of Birth/Age
- Gender
- Race
- Insurance type (public (Medicaid/Medicare and supplement if applicable), private/commercial, none)
- Line of therapy (1st-line oral or 2nd-line oral)
- Cancer diagnosis and stage
- Oral chemotherapy medication
- Name of medication prescribed
- Regimen (dose and frequency)
- Date prescribed
- Date dispensed
- Date of pickup by the patient or date that medication was shipped to the patient by the pharmacy
- Initial co-payment
- Whether or not patient assistance was received

References


Disclosures: Authors have no conflicts of interests regarding personal or financial relationships with commercial entities that may have influenced the content or subject matter of this presentation.