Background

- Breast cancer affects more than 250,000 women in the United States. Metastatic breast cancer (mBC) affects 6% of women and median survival is low (18-24 months).1
- Intravenous (IV) chemotherapies for mBC include eribulin, vinorelbine, gemcitabine, and differ in their duration of administration, which can impact resource use and patient satisfaction.

Objective

- We conducted a time-and-motion study to quantify the time associated with the administration of eribulin, vinorelbine, or gemcitabine in patients with mBC.
- Patient satisfaction was also assessed.

Methods

- This is a prospective, observational time-and-motion study of adult females with mBC receiving 42nd line eribulin, vinorelbine, or gemcitabine monotherapy at a large community oncology clinic.
- An observer documented the time routine clinical events occurred during a patient’s chemotherapy session.
- Patients completed a satisfaction survey adapted from the Agency for Healthcare Research and Quality’s cancer care survey2 and the Cancer Therapy Satisfaction Questionnaire.3
- Collected patient-level demographic and clinical data from medical charts.
- All patients could have up to 2 observations and completed the survey once.
- Data collection is ongoing. Interim analyses are presented here.

Results

- 17 patients comprising 31 observations (20 eribulin, 11 vinorelbine/gemcitabine) were included (Table 1).
  - Patients were 65 years on average, 71%, white, and 94% postmenopausal.
  - All were HER-2 negative.
  - Average duration (in years) since mBC diagnosis was lower for eribulin than vinorelbine/gemcitabine patients (1.7 vs. 5.0, p=0.009).
  - Patients were in the infusion chair for 73 minutes on average (Figure 2). Much of this time was waiting for chemotherapy to be brought to the patient chair after it had been ordered from pharmacy (mean 39 mins).

Conclusions

- Administration of eribulin was significantly shorter than vinorelbine/gemcitabine (Figure 2, 6 vs. 20 mins, p=0.001).
- 92% of patients were very satisfied with their cancer care experience (Figure 3).
- Satisfaction did not correlate with event times.

Table 1. Patient Demographics and Clinical Characteristics

<table>
<thead>
<tr>
<th>All patients</th>
<th>Eribulin</th>
<th>Vinorelbine/Gemcitabine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Number of observations</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>Age (in years, mean)</td>
<td>65.3</td>
<td>62.1</td>
</tr>
<tr>
<td>Race (White)</td>
<td>70.6</td>
<td>69.3</td>
</tr>
<tr>
<td>Race (Non-white)</td>
<td>29.4</td>
<td>30.7</td>
</tr>
<tr>
<td>Years since diagnosis of mBC (mean, SD)</td>
<td>2.0 (2.6)</td>
<td>6.0 (8.9)</td>
</tr>
<tr>
<td>ER positive (PR positive / HER-2 negative)</td>
<td>33.3</td>
<td>27.3</td>
</tr>
<tr>
<td>ER negative / PR positive / HER-2 negative</td>
<td>22.6</td>
<td>21.3</td>
</tr>
<tr>
<td>ER negative / PR negative / HER-2 negative</td>
<td>5.0</td>
<td>8.1</td>
</tr>
<tr>
<td>ER negative / PR negative / HER-2 positive</td>
<td>29.4</td>
<td>24.4</td>
</tr>
</tbody>
</table>

Figure 1. Time Periods Related to Chemotherapy Administration in mBC Patients

Figure 2. Average Time Associated With Each Time Period (Mean Minutes)

Figure 3. Percent of Respondents Very Satisfied With Cancer Care

References


Limitations

- Patients enrolled may not be representative of all mBC patients. A convenience sample of patients was prospectively enrolled from one clinic.
- All patients included in this study were HER-2 negative and more were receiving eribulin than vinorelbine/gemcitabine.
- Recording of timings during observations is subject to human error.
- Small sample size limits generalizability of results.

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A Time-and-Motion Study of Chemotherapy Administration in Metastatic Breast Cancer

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