Trends in Palliative Care Utilization in Patients with Advanced Breast Cancer

Kelly A. Stahl MD, Ashton Brooks MD, Christopher McLaughlin MD, Joseph Lewcun BS, Chan Shen PhD,
Department of Surgery, Penn State Health Milton S. Hershey Medical Center, Hershey, PA

Introduction

- Limited curative options for patients diagnosed with advanced breast cancer
- Palliative treatments include surgery, chemotherapy, radiation, pain management or combination therapy
- We hypothesized that the utilization of palliative treatments would increase over time in patients with advanced breast cancer

Methods

- The National Cancer Database (NCDB) was used to identify patients with stage IV breast cancer from 2005-2016
- Chi square tests examined subgroup differences between patients based on receipt of palliative treatments
- Logistic regression examined treatment patterns and demographic factors influencing the utilization of palliative treatments

Results

Table 1. Trends in the Utilization of Palliative Treatments Over Time in Advanced Breast Cancer

<table>
<thead>
<tr>
<th>Year</th>
<th>Surgery (%)</th>
<th>Chemotherapy (%)</th>
<th>Radiation (%)</th>
<th>Pain Management (%)</th>
<th>Combination Therapy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>3%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2009-2010</td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2011-2012</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>6%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>7%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

- 57,444 patients in our cohort
- Increased trend in the receipt of palliative treatments over 12-year period (18.3% in 2005-2006 to 25.2% 2015-2016)
- In 2015-2016 vs. 2005-2006 patients were 1.5 times as likely to receive palliative treatment (OR 1.510, p<.001).
- Palliative chemotherapy utilization increased the most (4.4% in 2005-2006 to 10.3% in 2015-2016)
- Combination therapy also increased (2% in 2005-2006 to 5% in 2015-2016)
- Elderly patients, females, White Hispanics, those living in the Midwest, South Atlantic and West coast and uninsured patients were less likely to receive palliative treatments

Conclusions

- Utilization of palliative treatments increased over this 12 year time period
- 74.8% of patients diagnosed in 2015-2016 did not receive any palliative treatments
- Room for improvement in provider and patient education about palliative treatment options
- Further studies needed to elucidate why certain population are less likely to receive palliative treatments

*The NCDB is a joint project of the Commission on Cancer of the American College of Surgeons and the American Cancer Society. The data used in this study are derived from a de-identified NCDB file. The American College of Surgeons and the Commission on Cancer have not verified and are not responsible for the analytic or statistical methodology employed, or the conclusions drawn from these data by the investigator. ** Questions for the authors please email: kstahl@pennstatehealth.psu.edu