COVID-19 impact and psychosocial well-being among adults living with cancer: A longitudinal analysis

Erica E. Fortune PhD, Victoria G. Morris, PhD, Caroline Lawrence, Alexandra K. Zaleta, PhD
Cancer Support Community, Research and Training Institute, Philadelphia, PA, USA

BACKGROUND

- COVID-19 continues to have long-lasting effects on healthcare experiences and health-related quality of life, especially for individuals who are more reliant on frequent medical services, such as those living with a cancer diagnosis.
- We examined the effects of healthcare disruption and psychosocial well-being among people with cancer more than 2 years into the evolving COVID-19 pandemic.

METHODS

- A longitudinal sample (N=173) of adults aged 18+ in the US who have ever been diagnosed with cancer participated in online surveys about their COVID-19 experiences at three timepoints: Time 1 (September – December 2020), Time 2 (June – July 2021), Time 3 (June – July 2022).
- Participants answered questions regarding:
  - COVID-19: negative impact (1=Not at all negatively impacted; 5=Extremely negatively impacted) and ever testing positive (yes/no)
  - Disruptions in cancer care: if experienced, how, and why
  - Psychosocial well-being: PROMIS-29 4-item Depression and Anxiety subscales; transformed standardized T-scores reported
- Frequencies were calculated and within-groups (repeated measures) and between-groups analyses (t-tests) were conducted

PARTICIPANTS

Descriptive Statistics at Time 1 (N = 173)

<table>
<thead>
<tr>
<th>Age (years), range (52-88)</th>
<th>M=60.4</th>
<th>SD=11.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>139</td>
<td>80%</td>
</tr>
<tr>
<td>Man</td>
<td>31</td>
<td>19%</td>
</tr>
<tr>
<td>Gender/Other</td>
<td>1</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Race &amp; Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>136</td>
<td>79%</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>12</td>
<td>7%</td>
</tr>
<tr>
<td>Non-Hispanic other/Multiracial</td>
<td>12</td>
<td>7%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11</td>
<td>6%</td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$60,000</td>
<td>64</td>
<td>37%</td>
</tr>
<tr>
<td>$60,000-$99,999</td>
<td>37</td>
<td>21%</td>
</tr>
<tr>
<td>$100,000+</td>
<td>43</td>
<td>25%</td>
</tr>
<tr>
<td>Cancer Diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast cancers</td>
<td>54</td>
<td>31%</td>
</tr>
<tr>
<td>Blood cancers</td>
<td>48</td>
<td>28%</td>
</tr>
<tr>
<td>Gynecological cancers</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>Gastrointestinal cancers</td>
<td>10</td>
<td>6%</td>
</tr>
<tr>
<td>Other cancers1</td>
<td>38</td>
<td>22%</td>
</tr>
<tr>
<td>Years Since Diagnosis</td>
<td>M=9.1</td>
<td>SD=8.0</td>
</tr>
<tr>
<td>&lt;2 years</td>
<td>24</td>
<td>14%</td>
</tr>
<tr>
<td>2 to &lt;5 years</td>
<td>49</td>
<td>28%</td>
</tr>
<tr>
<td>≥5 years</td>
<td>100</td>
<td>58%</td>
</tr>
<tr>
<td>Current Cancer Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiencing cancer</td>
<td>22</td>
<td>13%</td>
</tr>
<tr>
<td>Experiencing cancer recurrence/relapse</td>
<td>18</td>
<td>10%</td>
</tr>
<tr>
<td>In remission/No current evidence of disease</td>
<td>115</td>
<td>67%</td>
</tr>
<tr>
<td>Ever Metastatic</td>
<td>32</td>
<td>19%</td>
</tr>
</tbody>
</table>

RESULTS

Table 1. Frequency of disruption in cancer care at three time points during COVID-19

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept-Dec 2020</td>
<td>Jun-Jul 2021</td>
<td>Jun-Jul 2022</td>
</tr>
<tr>
<td>Had Disruption*</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Yes 78</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>No 95</td>
<td>55</td>
<td>84</td>
</tr>
</tbody>
</table>

Disruption Type

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine screening 20</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Imaging service 30</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>Lab service 29</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>Treatment session 10</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>Supportive services 10</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Other type 13</td>
<td>8%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*For Time 1 and 2, respondents were asked about disruption in cancer care within last 3 months. For Time 3, time frame was changed to "in last 3 months.

Table 2. PROMIS-29 Anxiety and Depression across all respondents

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>n=173</td>
<td>n=173</td>
</tr>
<tr>
<td>Time 1</td>
<td>56.7</td>
<td>54.4</td>
</tr>
<tr>
<td>Time 2</td>
<td>54.4</td>
<td>50.9</td>
</tr>
<tr>
<td>Time 3</td>
<td>54.7</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Depression

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 1</td>
<td>52.3</td>
<td>50.9</td>
</tr>
<tr>
<td>Time 2</td>
<td>50.9</td>
<td>9.0</td>
</tr>
<tr>
<td>Time 3</td>
<td>50.8</td>
<td>9.2</td>
</tr>
</tbody>
</table>

COVID-19 Impact

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 1</td>
<td>3.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Time 2</td>
<td>3.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Time 3</td>
<td>3.3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CONCLUSIONS AND IMPLICATIONS

- Notably, over 2 years into the COVID-19 pandemic, those living with cancer are still experiencing disruptions in their care despite high vaccination rates.
- While disruptions in cancer care, anxiety, depression, and negative impact of COVID-19 all decreased over time, those experiencing disruption in their cancer care reported worse psychosocial well-being at each of the three time points.
- Our results underscore the continued need for (1) tracking pandemic-related disruptions in cancer care and (2) providing accessible psychosocial support and resources among those experiencing disruptions in their cancer care, due to the ongoing impact of COVID-19.

ACKNOWLEDGMENTS

Financial support for this work was provided by AbbVie, Amgen Oncology, Astellas Pharma, Bristol Myers Squibb, Genentech, Gilead Sciences, Lilly Oncology, Merck & Co, Inc, Novocure, and Takeda Oncology. Recruitment support was provided by Cancer Support Community and Gilda’s Club partners, Colorectal Cancer Alliance, Head and Neck Cancer Alliance, Living Beyond Breast Cancer, Men’s Health Network, and Thelma D. Jones Breast Cancer Fund.