Health-related quality of life in disease-free survivors of breast cancer with the general population


In the January 2007 edition of the *Annals of Oncology* (18(1): 173–182), we published an article entitled ‘Health-related quality of life in disease-free survivors of breast cancer with the general population’. In it, we reported that there was a clinically significant difference between the two groups in cognitive and social functioning, fatigue, insomnia, and financial difficulties on the QLQ-C30 but similar multivariate-adjusted mean scores for all QLQ-BR23 scales. While recently extending that research, however, we discovered a coding error in the QLQ-BR23 of the general population sample. When we corrected the error, we found additional clinically significant differences between the two groups, and our results became more consistent with the published literature. Here, we present corrections and discuss the relevant data.

In the abstract, the results paragraph (page 173) should be corrected to the following:

The scores for some health-related quality of life (HRQoL) scales were comparable for both disease-free breast cancer survivors and the general female population, but there was a clinically significant difference between the two groups in cognitive and social functioning, fatigue, insomnia, financial difficulties, body image, future perspective, breast symptoms, and arm symptoms.

In the body of the paper, the ‘comparison of HRQoL between breast cancer survivors and the general population’ in the results section (page 177) should be corrected to the following:

Figures 2 and 3 present the HRQoL data for the breast cancer survivors and general population groups. Compared with the general population, breast cancer survivors reported poorer functioning scores in the QLQ-C30 and QLQ-BR23, except for sexual domains. They also had more severe symptoms. We found clinically significant differences among the survivors in the QLQ-C30 scales for cognitive functioning, social functioning, financial difficulties, fatigue, and insomnia and in the QLQ-BR23 scales for body image, future perspective, breast symptoms, and arm symptoms.

Our original Figure 3 (page 180) should be corrected to the following:

In the discussion section, the second sentence of first paragraph (page 180) should be corrected to the following:

However, our study indicates that deficits in cognitive and social functioning, fatigue, insomnia, financial difficulties, body image, future perspective, breast symptoms, and arm symptoms persist over years in women with breast cancer. Thus, to improve the HRQoL of cancer survivors, health care providers should focus more on these effects when delivering follow-up services.

In the fifth paragraph of the same section (page 181), the following is in error and should be deleted:

To our knowledge, no other study has compared the body images of breast cancer survivors with those of the general population, and we were surprised to find that they did not differ significantly in the present study. Although the mastectomy group had a worse body image than general population, the BCS group reported a clinically significant better body image than the general population, which we did not expect. This might be understood from cancer survivors’ developing positive attitudes from the cancer experience [1], but more study is required to clarify this.

In its place, we wish to provide the following:

The observed differences in the cognitive and social functioning, financial difficulties, fatigue, insomnia, body image, future perspective, breast symptoms, and arm symptoms were clinically meaningful (exceeding 10 points of 100) even after adjustment for many covariates. In contrast, overall quality of life, nausea and vomiting, dyspnea, appetite loss, diarrhea, and sexual functioning were comparable to the general population. These results are consistent with those of a recent German study [2] and suggest that even after treatment is completed, the HRQoL of breast cancer survivors is substantially reduced and does not return to the level of the general population.

**references**


We wish to apologize to the publisher and readers of *Annals of Oncology* for these errors.

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Figure 3. Least-square mean scores (adjusted for age, marital status, education, religion, employment status, menopausal status, and comorbidities) of EORTC QLQ-BR23 and problematic proportion of the breast cancer survivor population (BP) and the general population (GP). On the EORTC QLQ-BR23 breast cancer module of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire scale of 0–100, problematic functioning is indicated by a score $\leq 33$, and problematic symptoms are indicated by a score $>66$. $^a P < 0.001$, analysis of covariance, generalized linear model. $^b P < 0.001$, two-sided chi-square test.

<table>
<thead>
<tr>
<th></th>
<th>Body image</th>
<th>Sexual functioning</th>
<th>Sexual enjoyment</th>
<th>Future perspective</th>
<th>Systematic therapy side effect</th>
<th>Breast symptoms</th>
<th>Arm symptoms</th>
<th>Upset by hair loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP (%)</td>
<td>37.8$^a$</td>
<td>87.0</td>
<td>89.5</td>
<td>51.5$^b$</td>
<td>4.4$^a$</td>
<td>3.0$^a$</td>
<td>10.9$^b$</td>
<td>19.6$^b$</td>
</tr>
<tr>
<td>GP (%)</td>
<td>3.0</td>
<td>85.6</td>
<td>87.8</td>
<td>17.0</td>
<td>1.2</td>
<td>0.2</td>
<td>3.0</td>
<td>6.6</td>
</tr>
</tbody>
</table>

$^a$ P < 0.001, two-sided chi-square test.