Objective versus Subjective Cognitive Function in Breast Cancer Survivors
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Background
Up to 75% of breast cancer survivors experience cognitive deficits. Only 8/24 studies found a significant relationship between objective and subjective cognitive assessments.

Subjective tests assess a subject’s self-reported, perceived cognitive function. Subjective tests are the more common way of assessing cognition because they are easier to administer.

The differences between objective and subjective cognitive tests makes it difficult to standardize cognitive assessments/diagnoses in this population.

Objectives
To determine whether there is a correlation between objective and subjective cognitive function in breast cancer survivors.

Methods
A secondary analysis was done with data from the Memory & Motion study, which was conducted at the UCSD Moores Cancer Center (2015-2017; n=87).

Subjective cognition was measured with patient reported (PROMIS) surveys. Objective cognition was measured using tests from the NIH Toolbox.

Linear regression models were used to test for correlation between objective function and subjective cognitive abilities and objective function and subjective cognitive concerns.

Results

<table>
<thead>
<tr>
<th>Pathologic Stage</th>
<th>N (%)</th>
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</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>53 (61%)</td>
</tr>
<tr>
<td>Stage 2</td>
<td>27 (31%)</td>
</tr>
<tr>
<td>Stage 3</td>
<td>7 (8%)</td>
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<tr>
<td>Cancer Treatment</td>
<td></td>
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<tr>
<td>Chemo</td>
<td>46 (53%)</td>
</tr>
<tr>
<td>No Chemo</td>
<td>41 (47%)</td>
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<tr>
<td>Average age</td>
<td>57 years</td>
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<tr>
<td>Average years since surgery</td>
<td>2.5 years</td>
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</tbody>
</table>

No correlation was found between objective cognitive function and subjective cognitive concerns ($r = -0.074$) nor between objective cognitive function and subjective cognitive abilities ($r = 0.166$).

Conclusions
Subjective cognitive function is not representative of objective cognitive function in breast cancer survivors.

Policy Implications
Subjective cognitive tests should not be used as an accurate description of cognitive function in breast cancer survivors.

Resources should be put into conducting more objective cognitive function tests to better determine the rates of cognitive decline/improvement in this population.

Acknowledgements
We would like to thank Dr. Sheri Hartman for providing the data for this study and Dr. Sally A.D. Romero for her support in our analysis.

The data used was from the Memory & Motion study which was supported by the National Cancer Institute.

References