



ValidationInstitute

2022 Validation Report

Review for: Cancerlife

Validation Achieved: Level 2 - Outcomes

Valid through: December 2022



Company Profile

Category:	Digital Health Platform
Website:	http://www.cancerlife.com
Public or Private:	Private
Year Established:	2013
CEO:	Charles Coltman
Company contact:	support@cancerlife.com

Description:

Cancerlife is the only app that is clinically validated in a randomized control trial, sponsored by John Wayne Cancer Institute, to raise QoL by 14.3 % Our platform allows patients to share their health status with other patients, get social support using a form of cognitive behavioral therapy that improves QoL. Any patient regardless of location can use **CancerLife** to take control of their care and improve their mental and physical health.





Claim Assertion for Validation

Breast cancer patients who were users of CancerLife's app have more improvement in their EQ-5 Quality-of-Life Scores than randomly assigned non-users.

CancerLife services center on two things:

- 1) Improving communication from patient to physician about symptoms.
- 2) Offering patients social support.

Users enter data into the app which they can later share with their physician. Of those who used the symptom tracking feature and shared it with their physician, 70% reported that the symptom issue got addressed.

CancerLife's novel social network feed allows users to support each other. The Cancerlife experience mimics the feeling of Facebook so users can ask questions and engage with each other "who understand". Social support is linked to better physical and mental health-related quality of life. (Gentile, Markham, & Eaton, 2018)





Method / Calculation / Examples

Breast cancer patients were randomly assigned to receive an introduction to CancerLife's app. (N= 374 for intervention group; N=125 for control group.) Patients were drawn from various parts of the country and various types of care settings. These patients and those who were randomly assigned to usual care (not given CancerLife's app) took assessments at set time points. The assessment was the EQ-5D-3L, which has five dimensions (see below) and three levels of responses - no problems, some problems, extreme problems.

The average change in scores at 9, 12, 15 and 18 weeks was assessed for both groups. Statistical tests assessed whether the change in score was significant. For each time period the 95% confidence interval was calculated; this produces a range of score changes that the data are compatible with.



Findings & Validation

The Welch's Two Sample t-test was performed first, using R, to measure any statistical difference in these mean scores within each group for each time period through observing the resulting p-values and t-scores. In order to compare the scores of Patients in CancerLife's program with those in the Control groups, an F-test was performed, to observe if each sample contained the same variance which would make the groups comparable. The difference in scores were then calculated for each individual and Difference in means test were performed using Two Sample t-test to gauge improvements. This test was then repeated to measure the percent improvement in each group, as to record quantifiable improvement value for CancerLife if proven statically significant. All tests were performed at a 5% significance level.

The average age of patients was calculated and compared to the general population of breast cancer patients nationwide. In addition, the three-digit zip codes were counted and compared to the national count.

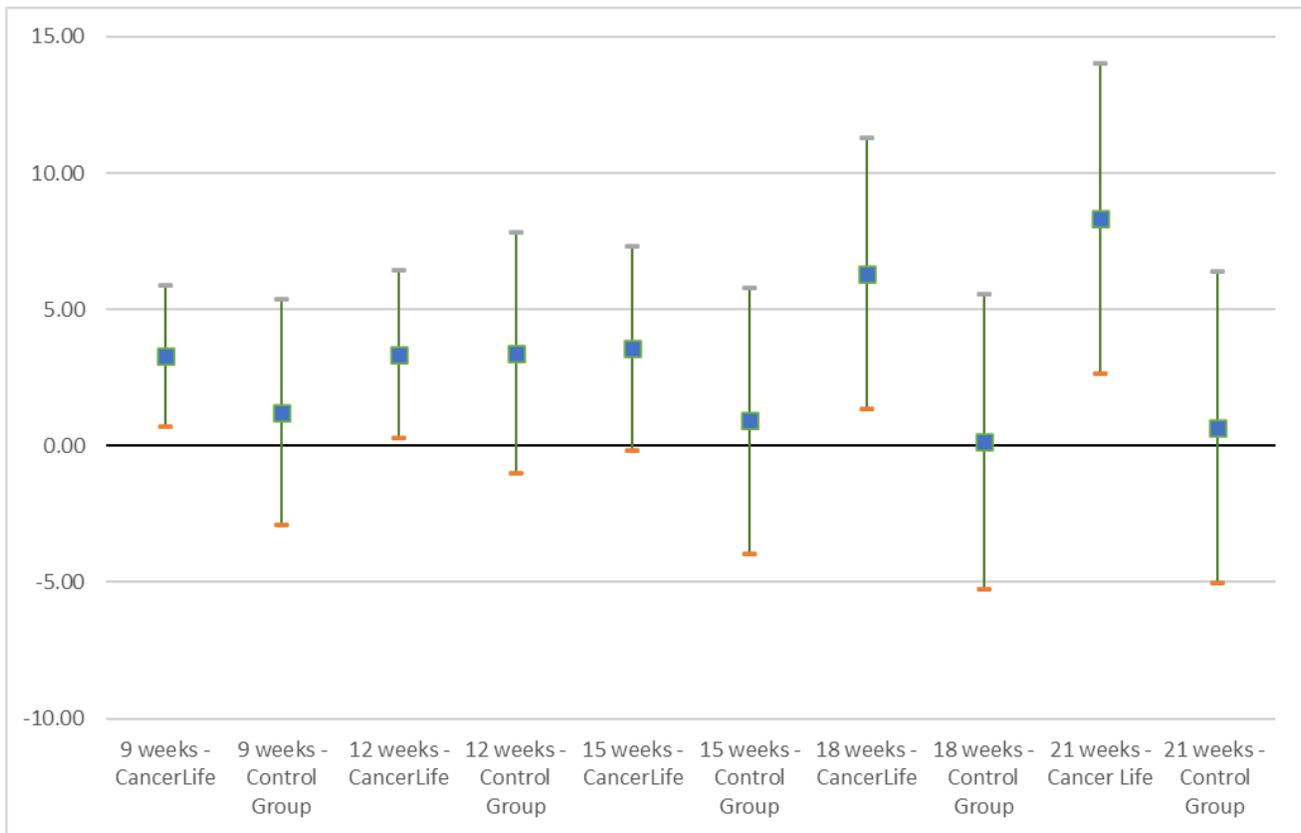
EQ-5D Dimensions – Topics addressed by Assessment

- Mobility
- Self-care
- Usual activities
- Pain/ discomfort
- Depression/ anxiety



Findings & Validation

The CancerLife users had significant improvements in their scores at 9, 12, 18, and 21 weeks; the improvement at 15 weeks was not significant. By contrast, the control group did not have significant improvements in their scores in any of the time periods. Graph 1 illustrates this: the estimated and calculated range (95% confidence interval) of improvements for the CancerLife group are above zero for all time periods except for 15 weeks. The calculated range of improvement for the control group spans from negative to positive; thus, zero is a possible value for the improvement.



Graph 1: Average Change from Baseline/ 95% Confidence Interval





Limitations

Average age for participants was 59 years old which is similar though slightly younger than average age of a breast cancer diagnosis at 62. Analysis of zip codes revealed participants were from a wide (number of be inserted) area codes throughout the country and based on these locations a mix of cancer care delivery settings.





Works Cited

Gentile, D., Markham, M. J., & Eaton, T. (2018). Patients with Cancer and Social Media: Harness Benefits, Avoid Drawbacks. *Journal of Oncology Practice*, 731-736.





Validation and Credibility Guarantee

Cancerlife's APP has achieved a level 2 – Validation for Outcomes. Validation Institute is willing to provide up to a \$25,000 guarantee as part of their Credibility Guarantee Program. To learn more, visit <https://validationinstitute.com/credibility-guarantee/>

Level 1 – Savings

Can reduce health care spending per case/participant or for the plan/purchaser overall.

Level 2 – Outcomes

Product/solution has measurably moved the needle on an outcome (risk, hba1c, events, employee retention, etc.) of importance.

Level 3 – Metrics

Credible sources and valid assumptions create a reasonable estimate of a program's impact.

Level 4 - Contractual Integrity

Vendor is willing to put a part of their fees "at risk" as a guarantee.





Validation Expiration: December 2022

CERTIFICATE OF VALIDATION

Applicant: **CancerLife**
12 West Willow Grove Ave, PHILADELPHIA,
Pennsylvania 19118-3877, US

Product: Cancerlife App

Claim: Breast cancer patients who were users of CancerLife's app have more improvement in their Quality-of-Life scores than randomly assigned non-users.

Validation Achieved: **Level 2 - Validated for Outcomes**

Award Date: February 2022

Linda K. Riddell, MS
VP, Population Health Scientist
Validation Institute

Benny DiCecca
Chief Executive Officer
Validation Institute





About Validation Institute

Validation Institute is a professional community that advocates for organizations and approaches that deliver better health value - stronger health outcomes at lower cost. We connect, train, and certify health care purchasers, and we validate and connect providers delivering superior results. Founded in 2014, the mission of the organization has consistently been to help provide transparency to buyers of health care.

