

# Developing Workshops to Enhance Hope Among Patients With Metastatic Breast Cancer and Oncologists: A Pilot Study

Mirat Shah, MD<sup>1</sup>; Anna Ferguson, RN, BSN<sup>1</sup>; Phyllis Dvora Corn, MSc<sup>2</sup>; Ravi Varadhan, PhD<sup>1</sup>; Dan Ariely, PhD<sup>3</sup>; Vered Stearns, MD<sup>1</sup>; B. Douglas Smith, MD<sup>1</sup>; Thomas J. Smith, MD<sup>1</sup>; and Benjamin W. Corn, MD<sup>4</sup>

**QUESTION ASKED:** This study evaluated the feasibility, acceptability, and efficacy of a short intervention to increase hopefulness in patients with metastatic breast cancer and oncologists.

**SUMMARY ANSWER:** A hope-enhancement workshop for patients with metastatic breast cancer and oncologists was feasible, generally acceptable to both populations, and associated with increased hopefulness in patients.

**WHAT WE DID:** Patients with metastatic breast cancer and oncologists participated in separate half-day hope-enhancement workshops based on Snyder's model of hope. This model posits that hope is a modifiable entity that can be augmented by having a desire to set goals, designing pathways to achieve those goals, and following those paths. Patients and oncologists completed assessments preworkshop, postworkshop, and at 3 months, which included the Adult Hope Scale (AHS) and Herth Hope Index (HHI).

**WHAT WE FOUND:** Most patients who were consented (76.9%) and all oncologists who were consented (100.0%) participated in the study. Postworkshop, all

participants were inclined to apply what they had learned to their daily lives. In patients, AHS scores and HHI scores increased from preworkshop to postworkshop, and the mean change of 5.9 in AHS scores was significant (range 0-15, SD: 4.7,  $t = 3.99$ ,  $P = .0032$ ). The AHS aligns more closely with Snyder's model of hope than the HHI.

**BIAS, CONFOUNDING FACTORS:** The patient cohort was small and relatively homogenous with respect to sex, age, race, and religion, which may limit generalizability of results. In oncologists, mean AHS scores and HHI scores were lower than in patients at baseline and did not increase postworkshop, highlighting that more work needs to be done to better understand hopefulness in this group. At 3 months, less than half of the participants completed the assessment indicating that postworkshop follow-up may be needed to reinforce key workshop concepts and maintain benefit in patients.

**REAL-LIFE IMPLICATIONS:** A short half-day intervention may increase hopefulness in patients with metastatic breast cancer.

## CORRESPONDING AUTHOR

Benjamin W. Corn, MD, Shaare Zedek Medical Center, 12 Bayt Street, Jerusalem 9103102, Israel; e-mail: [bencorn@szmc.org.il](mailto:bencorn@szmc.org.il).

## ASSOCIATED CONTENT

### Appendix

Author affiliations and disclosures are available with the complete article at [ascopubs.org/journal/op](https://ascopubs.org/journal/op).

Accepted on November 25, 2020 and published at [ascopubs.org/journal/op](https://ascopubs.org/journal/op) on February 17, 2021; DOI <https://doi.org/10.1200/OP.20.00744>

# Developing Workshops to Enhance Hope Among Patients With Metastatic Breast Cancer and Oncologists: A Pilot Study

Mirat Shah, MD<sup>1</sup>; Anna Ferguson, RN, BSN<sup>1</sup>; Phyllis Dvora Corn, MSc<sup>2</sup>; Ravi Varadhan, PhD<sup>1</sup>; Dan Ariely, PhD<sup>3</sup>; Vered Stearns, MD<sup>1</sup>; B. Douglas Smith, MD<sup>1</sup>; Thomas J. Smith, MD<sup>1</sup>; and Benjamin W. Corn, MD<sup>4</sup>

## abstract

**PURPOSE** Hope is a modifiable entity that can be augmented. We evaluated the feasibility, acceptability, and efficacy of a short intervention to increase hopefulness in patients with advanced breast cancer and oncologists.

**METHODS** We enrolled eligible participants to two cohorts: one for patients with metastatic breast cancer and one for medical, radiation, or surgical oncologists. The intervention, a half-day hope enhancement workshop, included groups of 10-15 participants within each cohort. Participants in both cohorts completed preworkshop, postworkshop, and 3-month evaluations, which included the Adult Hope Scale (AHS), Herth Hope Index (HHI), and Patient-Reported Outcomes Measurement Information System-Global Health (PROMIS-GH) measures in patients, and the AHS, HHI, and a burnout self-assessment tool in physicians.

**RESULTS** We consented 13 patients and 26 oncologists for participation in the workshop and 76.9% (n = 10) of consented patients and 100% (n = 26) of consented physicians participated. Postworkshop, all participants planned to incorporate what they learned into their daily lives. In patients, AHS scores increased from preworkshop to postworkshop, and the mean change of 5.90 was significant (range 0-15, SD: 4.7,  $t = 3.99$ ,  $P = .0032$ ). HHI scores also increased, although the mean change was not significant. AHS and HHI scores did not significantly change in oncologists from preworkshop to postworkshop. At 3 months, less than half of the participants responded to the evaluation.

**CONCLUSION** We found that conducting a hope-enhancement workshop for patients with metastatic breast cancer and oncologists was feasible, generally acceptable to both populations, and associated with increased hopefulness in patients. Next steps should focus on confirming this effect in a randomized study and maintaining this effect in the postworkshop interval.

JCO Oncol Pract 17:e785-e793. © 2021 by American Society of Clinical Oncology

## INTRODUCTION

Patients with metastatic breast cancer have limited life expectancy and face many hardships.<sup>1,2</sup> The cancer will likely cause physical symptoms including pain, nausea, and fatigue, and most patients will receive several lines of therapy, which have concomitant side effects. Patients may also experience emotional burden from distress, anxiety, and depression, as well as psychosocial and financial stressors.<sup>3-5</sup>

Physicians who care for patients with advanced cancer also deal with many challenges. They prescribe toxic therapies, are frequently powerless to change outcomes, and witness suffering and death. These experiences can culminate in depression, exhaustion, and burnout, which can have additional

consequences such as lack of empathy for patients and deterioration of personal relationships outside of work.<sup>6</sup>

One difficulty for patients with advanced cancer and oncologists is living with the loss of hope. Although this concern lurks, it is rarely discussed. Moreover, hope is vitally important but elusive to define.<sup>7</sup> Snyder's conception of hope has been adopted by many in oncology.<sup>8</sup> This construct separates hope from treatment outcome and posits that patients can have hope even with incurable disease.<sup>9,10</sup> Snyder's model maintains that having a desire to set goals, designing pathways to achieve those goals, and following those paths can increase hopefulness. The model asserts that hope is not static, but a modifiable entity that can be augmented.

Author affiliations and support information (if applicable) appear at the end of this article.

Accepted on November 25, 2020 and published at [ascopubs.org/journal-op](https://ascopubs.org/journal-op) on February 17, 2021; DOI <https://doi.org/10.1200/OP.20.00744>

Prior studies in patients with chronic illnesses confirmed that the level of hope can change and that interventions to increase hope can also improve coping and quality of life.<sup>11-14</sup> In patients with advanced cancer, both a 1-week hope enhancement program and an 8-week program increased hopefulness.<sup>15,16</sup> The 8-week intervention continued to benefit patients 3, 6, and 9 months after it concluded. Given the time constraints of patients, a large gap pertains to whether a much shorter (eg, half-day) intervention can have an immediate impact and sustained benefit vis-à-vis hope enhancement.<sup>17</sup>

In physicians and other healthcare providers, hope has been shown to have an inverse relationship with burnout, increase job satisfaction, and be associated with reduced self-perceived medical errors.<sup>18-20</sup> Burnout reduction interventions have been successful in physicians, but it is unknown if an intervention can increase hopefulness.<sup>21</sup> In this pilot study, we aimed to determine the feasibility, acceptability, and preliminary efficacy of a half-day hope-enhancement workshop for patients with metastatic breast cancer and for oncologists.

## METHODS

### Study Population and Recruitment

There were two separate cohorts for participants: one for patients and one for physicians. Patients were of age 18 years or older with a diagnosis of stage IV breast cancer and had an Eastern Cooperative Oncology Group (ECOG) performance status of 0-3. Physicians were either a trainee or faculty with an MD or equivalent degree and practiced one of three oncologic disciplines: medical oncology, radiation oncology, or surgical oncology. All participants were English-speaking and had email access.

We recruited patients from the Johns Hopkins breast cancer clinics, and they took part in a workshop at Johns Hopkins Hospital (JHH) in Baltimore, MD. We recruited and enrolled physicians to workshops at two sites: JHH and Tel Aviv Medical Center (TAMC) in Tel Aviv, Israel. Israeli patients were not offered study participation since some did not have English proficiency and the workshop tools have not yet been translated or validated.

### Study Procedures

Recruitment materials included Institutional Review Board (IRB)-approved electronic and posted advertisements and recruitment started 6 weeks prior to the workshop. We asked participants to complete assessments prior to the workshop, immediately after the workshop, and 3 months following the workshop.

For patients, assessments included the Adult Hope Scale (AHS), the Herth Hope Index (HHI), the Patient-Reported Outcomes Measurement Information System-Global Health (PROMIS-GH) measure, and additional questions about

the workshop. For physicians, assessments included the AHS, HHI, a short burnout self-assessment tool, and additional questions about the workshop. The AHS measures hope according to Snyder's conception and higher scores are associated with increased hopefulness.<sup>9</sup> The HHI measures the multidimensional nature of hope, and a higher score is associated with increased hopefulness.<sup>22-24</sup> The PROMIS-GH metric is a measure of overall well-being and is scored on physical health and mental health subscales.<sup>25</sup> Higher scores represent better physical or mental health. The burnout self-assessment tool assigns a score to predict the risk of burnout, and higher scores indicate a higher likelihood of burnout.<sup>26</sup>

Participants completed assessments in an electronic form supported by Qualtrics software from a laptop or mobile device. Each participant used a unique study ID and did not enter personal identification information into this platform. The JHH IRB and the TAMC IRB approved the study protocol (ClinicalTrials.gov identifier: [NCT03074071](https://clinicaltrials.gov/ct2/show/study/NCT03074071)).

### Workshop Structure

Each workshop accommodated 10-15 participants. There was one patient and one physician workshop at JHH, and there was one physician workshop at TAMC. The patient and physician workshops were identical, and the purpose of each was to enhance the internal hopefulness in patients and physicians. The workshop did not aim to change how physicians communicate with patients about hope during clinical encounters. The workshops were developed based on Snyder's conception of hope and led by trained facilitators. The hope-enhancement workshop consisted of brief exercises to build each participant's strength in nominating goals that were personally relevant and designing pathways to achieve these objectives. The workshop began with a short didactic lecture that summarized hope theory. Participants then received a hope map and selected personal goals that could be accomplished within 6 months, defined a pathway to reach that goal, and considered potential obstacles and how to navigate these. Participants discussed their plans in an open forum and received feedback from the group. Finally, participants were led through a mental rehearsal that helped them envision overcoming obstacles in pursuit of their goals. Participants were encouraged to ask questions throughout the workshop. The total duration was approximately 4 hours. There were no incentives for study participation beyond reimbursement of parking costs.

### Outcome Measures

The primary objective for this study was feasibility, measured as the proportion of consented participants who completed the workshop. The secondary objectives were to examine acceptability and preliminary efficacy of the intervention. Acceptability was assessed with yes/no and multiple-choice questions and open-ended questions. The

main efficacy measure was mean change in AHS score from preworkshop to postworkshop. Additional efficacy measures included mean change from preworkshop to postworkshop HHI scores, PROMIS-GH scores in patients, and burnout self-assessment scores in physicians. Comparison of preworkshop AHS, HHI, PROMIS-GH, and burnout self-assessment scores to 3-month scores also occurred.

### Statistical Analysis

The study sample size was based on convenience to conduct the workshops in groups of 10-15 participants each. We assessed patients and physicians in separate cohorts for feasibility, acceptability, and efficacy. For feasibility, the study was successful if 75% of those consented in each cohort participated in the workshop.

Acceptability was assessed as the proportion of patients who selected a certain answer in response to a yes/no or multiple-choice question. Efficacy assessment relied on the following participant-reported outcomes: AHS, HHI, and PROMIS-GH measures for patients, and the AHS, HHI, and burnout self-assessment tool for physicians. Participants completed assessments for these measures preworkshop, postworkshop, and at 3 months. For each measure, we looked at the distribution of scores at each time point. We used paired *t*-tests to assess the mean change in scores between preworkshop and postworkshop and preworkshop and 3 months. All efficacy analyses were done using Stata version 15.

## RESULTS

### Patients

**Feasibility of the workshop.** We consented 13 patients to this study, and 10 patients (76.9%) participated in the hope-enhancement workshop. All patients enrolled to this study were women, and the median age was 52.5 years (range, 48-65 years). Nine out of 10 women reported their race as Caucasian and one patient reported her race as other. Two out of 10 patients identified as Hispanic or Latino. Seven out of 10 patients identified as Christian, including five patients who identified as Catholic; the three other patients reported no religion.

All 10 patients completed the preworkshop and postworkshop assessments. At 3 months, only half of the patients ( $n = 5$ ) completed the assessment. Patients did not receive reminders or other prompts to complete the 3-month survey. On average, patients required  $< 10$  minutes to complete the battery of questionnaires. An overview of consented patients is shown in [Figure 1A](#).

**Acceptability and efficacy of the workshop.** Postworkshop, all patients (100%,  $n = 10$ ) rated their experience favorably among the three options, favorably, neutral, or unfavorably, and all would recommend the workshop to other patients. All patients (100%,  $n = 10$ ) answered yes to the question

on whether goal-setting and/or regoaling can contribute to increased hopefulness, were inclined to incorporate goal-setting ideas into their daily lives, and had a specific goal in mind. All patients responded that no aspect of the HEW made them uncomfortable. At 3 months, of the five patients who responded, four reported using principles from the HEW with three working on the goal they had outlined. Some thought-provoking comments are shared in [Appendix Table A1](#), online only.

Results from the various efficacy assessments over the course of the study are shown in [Table 1](#). AHS scores increased from preworkshop to postworkshop, and the mean change of 5.90 was significant (SD: 4.7,  $t = 3.99$ ,  $P = .003$ ). HHI scores also increased, although the mean change was not significant. At 3 months, only half of the patients completed the assessment.

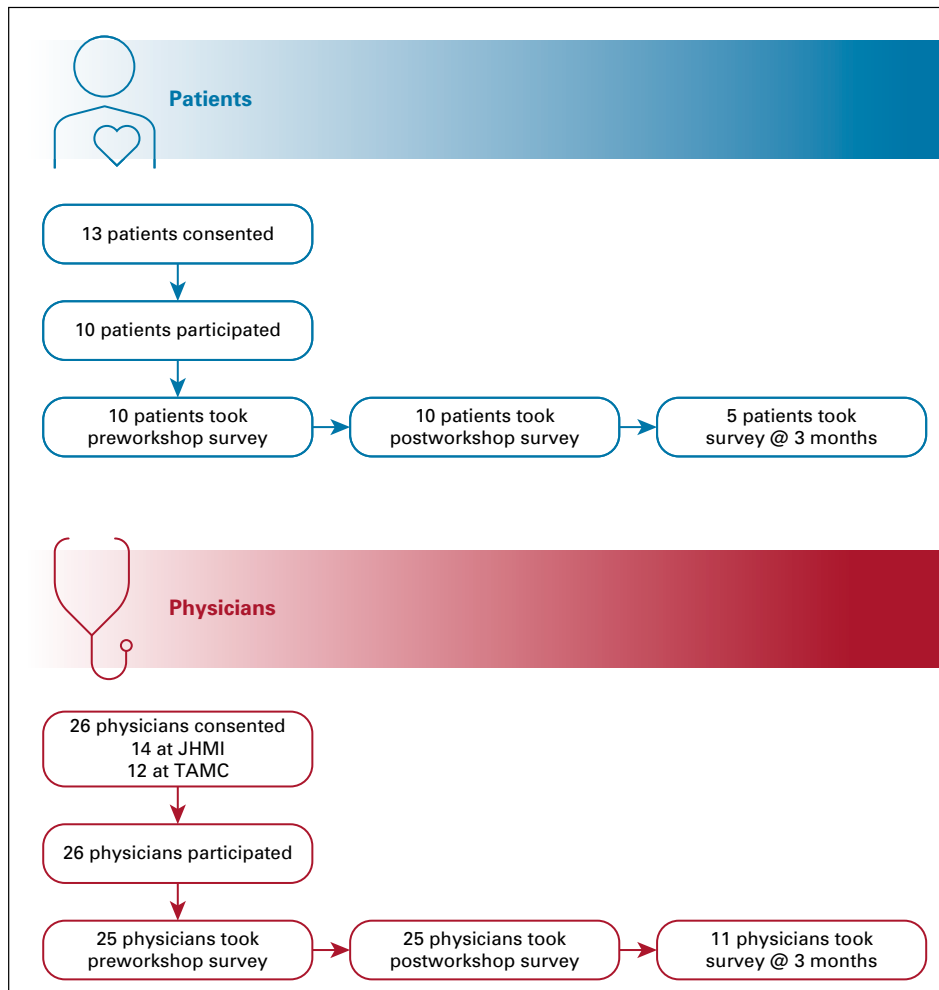
### Oncologists

**Feasibility of the workshop.** We consented 26 oncologists to this study, 14 at JHMI and 12 at TAMC, and all physicians participated in the hope-enhancement workshop. Evaluations from the two groups of physicians were pooled and examined together. Thirteen physicians were medical oncologists, 12 physicians were radiation oncologists, and one physician was a surgical oncologist. Eight physicians were trainees and the rest were faculty.

All 26 physicians took the preworkshop evaluation, but one person submitted 1 week after the completion of the workshop. This evaluation was not included in our analysis. Postworkshop, 24 of 26 physicians submitted the assessment. All 24 completed the AHS, HHI, and MBI instruments, but only 18 completed the other questions. At 3 months, only 11 of the 26 physicians submitted the evaluation. Physicians did not receive reminders or other prompts to complete the 3-month survey. An overview of consented oncologists is shown in [Figure 1B](#).

**Acceptability and efficacy of the workshop.** Out of 18 physicians, 16 (88.9%) rated their experience favorably and two physicians (11.1%) rated their experience as neutral. All would recommend the HEW to a colleague (100%,  $n = 18$ ). All physicians (100%,  $n = 18$ ) agreed that goal-setting could increase hopefulness and were inclined to incorporate principles learned into their daily lives, and all but one (94%,  $n = 17$ ) had a specific goal in mind. Many (72%,  $n = 13$ ) planned to incorporate hopefulness into their interactions with patients, but some noted this may be challenging or they may need additional training. More than half (55%,  $n = 10$ ) thought the HEW was different than they expected, and some specifically noted that they expected it to be more focused on helping patients. A notable minority (27%,  $n = 5$ ) responded that aspects of the HEW made them uncomfortable, particularly sharing their goals with the group.

At 3 months, only one-third of responding physicians (36%,  $n = 4$ ) used the concepts learned in their personal lives,



**FIG 1.** Overview of patients and physicians consented to participate in the hope-enhancement workshop.

and less than half (45%,  $n = 5$ ) used what they learned in the clinic. Interestingly, most (73%,  $n = 8$ ) still planned to incorporate hope-enhancement strategies in the future and some (45%,  $n = 5$ ) recommended a reinforcement of principles after the HEW. Some thought-provoking comments are shared in [Appendix Table A2](#), online only.

Results of the various assessments over the course of the study are shown in [Table 1](#). In the physician cohort, there were no significant mean changes in AHS scores, HHI scores, or the other assessments at the different time points.

## DISCUSSION

We piloted a short half-day intervention to increase hopefulness in two separate groups: patients with metastatic breast cancer and oncologists. We determined this workshop was feasible in both groups. The intervention was also generally acceptable to both patients and physicians who agreed that goal-setting could increase hopefulness. Postworkshop, all were inclined to apply what they learned to their daily lives, and most had a specific goal in mind. Many

physicians planned to incorporate what they learned into the clinic. One caveat is that some physicians found certain aspects of the workshop uncomfortable, and this will be discussed in further detail below. In patients, AHS scores increased from preworkshop to postworkshop, and the mean change was significant. HHI scores also increased, although the mean change was not significant. In physicians, the mean changes in AHS and HHI scores preworkshop and postworkshop were much smaller and not significant. At 3 months, only half of the patients and fewer than half of the oncologists responded to the evaluation.

Our study was small and designed only to assess preliminary efficacy, and therefore, the following discussion of efficacy end points must be considered exploratory. We used both the AHS and HHI to measure hopefulness. The hope-enhancement workshop is based on Snyder's conception of hope in which goal-setting can increase hopefulness, and the AHS is designed to measure this dimension of hope. The HHI touches on additional domains including spirituality, interconnectedness, and other facets

**TABLE 1.** Change in Participant Scores on Hopefulness Instruments Between Study Time Points, Mean (SD)

Parameter	Preworkshop to Postworkshop	<i>P</i> <sup>a</sup>	Preworkshop to 3 Months	<i>P</i> <sup>a</sup>
Patients, n	10		5	
AHS	5.9 (4.7)	.003	−3.2 (8.2)	.4
HHI	3.2 (5.8)	.1	0 (4.7)	1.00
PROMIS-GH				
Physical	3.2 (5.8)	.1	−4.4 (11.0)	.4
Mental	2.3 (4.2)	.1	−5.1 (8.5)	.3
Physicians, n	24		11	
AHS	1.2 (4.2)	.2	1.8 (4.0)	.2
HHI	1.5 (3.6)	.06	2.2 (2.9)	.03
Burnout self-test	−0.3 (3.8)	.7	−4.0 (6.9)	.08

Abbreviations: AHS, Adult Hope Scale; HHI, Herth Hope Index; PROMIS-GH, Patient-Reported Outcomes Measurement Information System-Global Health; SD, standard deviation.

<sup>a</sup>Based on paired *t*-test.

of hope, which were not highlighted during the workshop. This is potentially why the magnitude of effect on AHS was greater than on HHI for patients in our study.

An innovation of our study was showing that even a short half-day intervention may enhance hope in patients. Earlier studies have relied on longer interventions to improve hopefulness.<sup>15,16</sup> Patients with advanced cancer have many competing medical and personal priorities and a shorter intervention could be more acceptable. Unfortunately, in our study, hope enhancement was not maintained, and at 3 months, only half of the patients responded to the evaluation. This cannot be attributed solely to changing health status of the patients, as the survey response rate was poor even among physicians. An earlier study also found that the magnitude of benefit for patients of a hope-enhancement intervention declined over time.<sup>16</sup> One solution could be sustained contact with workshop participants to reinforce the workshop's principles, which should start soon after completion of the workshop. Post-workshop follow-up could be mobile application-based rather than in person. Indeed, mobile technology has aided other healthcare interventions including for management of diabetes, symptoms related to HIV, atrial fibrillation, hypertension, and weight loss.<sup>27-33</sup> We are currently defining the functionalities to incorporate into a smartphone application for oncology patients for maintenance of hopefulness. In addition, we are also considering modifications to conduct the workshop on videoconferencing platforms, which would allow us to comport with social-distancing guidelines and pursue accelerated scale up.

Compared to patients, the oncologists had the same mean AHS score and a lower mean HHI score at baseline, highlighting that there are many threats to hopefulness in addition to a diagnosis of advanced cancer. There is a body of work suggesting that physician hopefulness may be inversely associated with burnout and may have other

positive effects. We are not aware of previous studies attempting to augment physician hopefulness, which highlights the steep learning curve to modifying hope in oncologists. A recent study speculated that oncologists have inherent discomfort with the concept of hopefulness.<sup>34</sup> A sizable number of oncologists reported that the sharing aspects of the workshop made them uncomfortable, compared with none of the patients. One oncologist explicitly commented that they chose a safe goal to share. Others could have felt similarly constrained, limiting the workshop's efficacy.

Furthermore, some oncologists thought the workshop would focus on enhancing hope in patients, not for themselves. After the workshop, many oncologists wanted to incorporate hopefulness into their clinical encounters but thought that they may need additional training. Next steps for oncologists could include shaping the workshop to apply to the care of their patients. In addition, we have begun to develop patient and caregiver educational materials that can assist physicians in introducing hopefulness as a parameter of well-being. This could optimize the meaning oncologists find in their work, which may in turn reduce burnout.

An additional limitation of our study was that the patient group was relatively homogeneous. All patients were female and within a narrow age range, most patients were Caucasian, and most patients identified as Christian. Further work in a more diverse patient population is required to determine the generalizability of the intervention for patients. Additionally, we did not ask participants about their social supports, marital status, dependent children, employment status, educational background, spirituality, or other additional factors that could affect hope. Subsequent studies should collect this information and assess the potential impact on hope modification. A contrasting limitation in physicians may be that the group of participating



oncologists was too heterogeneous by including faculty and trainees. The inclusion of both groups could have heightened discomfort surrounding the sharing aspects of the workshop.

Another important limitation of this study that has already been touched on was its small size and lack of random assignment. A larger, randomized study is needed to determine if the intervention can increase hopefulness in patients. Toward this end, the Southwest Oncology Group (SWOG) has expressed interest in studying hope enhancement for patients and healthcare providers using the

model described herein (M. O'Rourke, personal communication, May 11, 2020).

In conclusion, a short intervention to increase hopefulness in patients with metastatic breast cancer and oncologists was feasible, acceptable, and was associated with increased hopefulness in patients immediately postworkshop. Follow-up was poor in both patients and oncologists at 3 months. Next steps should include earlier follow-up and more sustained contact with participants postworkshop as well as considering how the workshop can help oncologists care for their patients.

## AFFILIATIONS

<sup>1</sup>Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD

<sup>2</sup>Life's Door, Jerusalem, Israel

<sup>3</sup>Duke University, Durham, NC

<sup>4</sup>Shaare Zedek Medical Center, Jerusalem, Israel

## CORRESPONDING AUTHOR

Benjamin W. Corn, MD, Shaare Zedek Medical Center, 12 Bayt Street, Jerusalem 9103102, Israel; e-mail: bencorn@szmc.org.il.

## PRIOR PRESENTATION

Presented in part at the ASCO Supportive Care in Oncology Symposium, San Francisco, CA, October 2019.

## SUPPORT

Supported by the Pamm Gross Kahane Research Institute of Life's Door (P.D.C., B.W.C.), the Center for Advanced Hindsight of Duke University (D.A.), and the Sidney Kimmel Comprehensive Cancer Center Core grant P30-CA006973 (V.S.).

## AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Disclosures provided by the authors are available with this article at DOI <https://doi.org/10.1200/OP.20.00744>.

## AUTHOR CONTRIBUTIONS

**Conception and design:** Mirat Shah, Anna Ferguson, Phyllis Dvora Corn, Dan Ariely, B. Douglas Smith, Thomas J. Smith, Benjamin W. Corn  
**Administrative support:** Thomas J. Smith

**Provision of study materials or patients:** Vered Stearns

**Collection and assembly of data:** Mirat Shah, Phyllis Dvora Corn, B. Douglas Smith, Thomas J. Smith

**Data analysis and interpretation:** Mirat Shah, Phyllis Dvora Corn, Ravi Varadhan, Vered Stearns, Thomas J. Smith

**Manuscript writing:** All authors

**Final approval of manuscript:** All authors

**Accountable for all aspects of the work:** All authors

## ACKNOWLEDGMENT

The authors would like to acknowledge Dr Orit Gutfield who enabled conduct of the trial at Tel Aviv Medical Center.

## REFERENCES

- Thi Santosapal ES, Tran TT, Della-Fiorentina SA, et al: Survival times of women with metastatic breast cancer starting first-line chemotherapy in routine clinical practice versus contemporary randomised trials. *Intern Med J* 43:883-888, 2013
- Kiely BE, Soon YY, Tattersall MH, et al: How long have I got? Estimating typical, best-case, and worst-case scenarios for patients starting first-line chemotherapy for metastatic breast cancer: A systematic review of recent randomized trials. *J Clin Oncol* 29:456-463, 2011
- Aranda S, Schofield P, Weih L, et al: Mapping the quality of life and unmet needs of urban women with metastatic breast cancer. *Eur J Cancer Care (Engl)* 14: 211-222, 2005
- Ganz PA, Stanton AL: Living with Metastatic Breast Cancer. *Adv Exp Med Biol* 862: 243-254, 2015
- Mosher CE, Johnson C, Dickler M, et al: Living with metastatic breast cancer: A qualitative analysis of physical, psychological, and social sequelae. *Breast J* 19: 285-292, 2013
- Shanafelt T, Dyrbye L: Oncologist burnout: Causes, consequences, and responses. *J Clin Oncol* 30:1235-1241, 2012
- Corn BW, Feldman DB, Wexler I: The science of hope. *Lancet Oncol* 21:e452-e459, 2020
- Snyder CR, Harris C, Anderson JR, et al: The will and the ways: Development and validation of an individual-differences measure of hope. *J Pers Soc Psychol* 60:570-585, 1991
- Buckley J, Herth K: Fostering hope in terminally ill patients. *Nurs Stand* 19:33-41, 2004
- Duggleby W, Wright K: Elderly palliative care cancer patients' descriptions of hope-fostering strategies. *Int J Palliat Nurs* 10:352-359, 2004
- Ghazavi Z, Khaledi-Sardashti F, Kajbaf MB, et al: Effect of hope therapy on the hope of diabetic patients. *Iran J Nurs Midwifery Res* 20:75-80, 2015
- Fraser C, Keating M: The effect of a creative art program on self-esteem, hope, perceived social support, and self-efficacy in individuals with multiple sclerosis: A pilot study. *J Neurosci Nurs* 46:330-336, 2014
- Alberto J, Joyner B: Hope, optimism, and self-care among Better Breathers Support Group members with chronic obstructive pulmonary disease. *Appl Nurs Res* 21:212-217, 2008
- Bahmani B, Motamed Najjar M, Sayyah M, et al: The effectiveness of cognitive-existential group therapy on increasing hope and decreasing depression in women-treated with haemodialysis. *Glob J Health Sci* 8:219-225, 2015
- Duggleby WD, Degner L, Williams A, et al: Living with hope: Initial evaluation of a psychosocial hope intervention for older palliative home care patients. *J Pain Symptom Manage* 33:247-257, 2007

16. Herth K: Enhancing hope in people with a first recurrence of cancer. *J Adv Nurs* 32:1431-1441, 2000
  17. Feldman DB, Dreher DE: Can hope be changed in 90 minutes? Testing the efficacy of a single-session goal-pursuit intervention for college students. *J Happiness Stud* 13:745-59, 2012
  18. Vetter MH, Vetter MK, Fowler J: Resilience, hope and flourishing are inversely associated with burnout among members of the Society for Gynecologic Oncology. *Gynecol Oncol Rep* 25:52-55, 2018
  19. Duggleby W, Cooper D, Penz K: Hope, self-efficacy, spiritual well-being and job satisfaction. *J Adv Nurs* 65:2376-2385, 2009
  20. Hayashino Y, Utsugi-Ozaki M, Feldman MD, et al: Hope modified the association between distress and incidence of self-perceived medical errors among practicing physicians: Prospective cohort study. *PLoS One* 7:e35585, 2012
  21. West CP, Dyrbye LN, Rabatin JT, et al: Intervention to promote physician well-being, job satisfaction, and professionalism: A randomized clinical trial. *JAMA Intern Med* 174:527-533, 2014
  22. Herth K: Abbreviated instrument to measure hope: Development and psychometric evaluation. *J Adv Nurs* 17:1251-1259, 1992
  23. Benzein E, Berg A: The Swedish version of Herth Hope Index—an instrument for palliative care. *Scand J Caring Sci* 17:409-415, 2003
  24. Ripamonti CI, Buonaccorso L, Maruelli A, et al: Hope Herth Index (HHI): A validation study in Italian patients with solid and hematological malignancies on active cancer treatment. *Tumori* 98:385-392, 2012
  25. PROMIS: Global Health: A Brief Guide to PROMIS Global Health Instruments. [http://www.healthmeasures.net/images/PROMIS/manuals/PROMIS\\_Global\\_Scoring\\_Manual.pdf](http://www.healthmeasures.net/images/PROMIS/manuals/PROMIS_Global_Scoring_Manual.pdf)
  26. Tools M: Burnout Self-Test: Checking Yourself for Burnout. [https://www.mindtools.com/pages/article/newTCS\\_08.htm](https://www.mindtools.com/pages/article/newTCS_08.htm)
  27. Bradley LE, Forman EM, Kerrigan SG, et al: Project HELP: A remotely delivered behavioral intervention for weight regain after bariatric surgery. *Obes Surg* 27: 586-598, 2017
  28. Bollyky JB, Bravata D, Yang J, et al: Remote lifestyle coaching plus a connected glucose meter with certified diabetes educator support improves glucose and weight loss for people with type 2 diabetes. *J Diabetes Res* 2018:3961730, 2018
  29. Hartman SJ, Nelson SH, Cadmus-Bertram LA, et al: Technology- and phone-based weight loss intervention: Pilot RCT in women at elevated breast cancer risk. *Am J Prev Med* 51:714-721, 2016
  30. Pal K, Eastwood SV, Michie S, et al: Computer-based diabetes self-management interventions for adults with type 2 diabetes mellitus. *Cochrane Database Syst Rev* 2013:Cd008776, 2013
  31. Schnall R, Cho H, Mangone A, et al: Mobile health technology for improving symptom management in low income persons living with HIV. *AIDS Behav* 22: 3373-3383, 2018
  32. Guo Y, Chen Y, Lane DA, et al: Mobile health technology for atrial fibrillation management integrating decision support, education, and patient involvement: mAF app trial. *Am J Med* 130:1388-1396.e6, 2017
  33. Milani RV, Lavie CJ, Bober RM, et al: Improving hypertension control and patient engagement using digital tools. *Am J Med* 130:14-20, 2017
  34. Corn BW, Feldman D, Schapira L, et al: Oncologist's reluctance to use the terms hope and cure: A bibliometric analysis of articles from high-impact journals. *JNCI Cancer Spectr* 4:pkaa065, 2020
-



**AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST****Developing Workshops to Enhance Hope Among Patients With Metastatic Breast Cancer and Oncologists: A Pilot Study**

The following represents disclosure information provided by authors of this manuscript. All relationships are considered compensated unless otherwise noted. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to [www.asco.org/rwc](http://www.asco.org/rwc) or [ascopubs.org/op/authors/author-center](http://ascopubs.org/op/authors/author-center).

Open Payments is a public database containing information reported by companies about payments made to US-licensed physicians ([Open Payments](#)).

**Dan Ariely**

**Patents, Royalties, Other Intellectual Property:** Founder of Shapa—a numberless scale that helps people control their weight

**Vered Stearns**

**Research Funding:** AbbVie, Pfizer, MedImmune, Novartis, Puma Biotechnology, Biocept

**Other Relationship:** Immunomedics

**B. Douglas Smith**

**Honoraria:** Novartis Pharmaceuticals UK Ltd, Pfizer, Agios, Bristol Myers Squibb

**Consulting or Advisory Role:** CSL Behring, Celgene

**Thomas J. Smith**

**Honoraria:** Athenex, Association of Community Cancer Centers (ACCC)

**Patents, Royalties, Other Intellectual Property:** Royalties from Oxford Textbook of Cancer Communication, co-editor

**(OPTIONAL) Open Payments Link:** <https://openpaymentsdata.cms.gov/physician/202382/general-payments>

No other potential conflicts of interest were reported.

## APPENDIX

TABLE A1. Thought-Provoking Comments From Patients

**Post-workshop assessment**

Was the workshop what you expected it to be when you agreed to participate?

*I wasn't sure what to expect! But it was great!*

*No, as I didn't know what to expect.*

Did you connect with the facilitator and other participants in the workshop favorably?

*Yes, I was able to meet others with my same concerns.*

Do you have an idea for a goal already in mind? Is that goal achievable? How soon will you begin implementing your goal?

*Yes. Tomorrow.*

*Yes, I have several ideas. Will start this week.*

*Yes, and it is, I have begun.*

**3-month assessment**

Would you care to elaborate on how you used/why you did not use the hope concepts in your personal life?

*Spending time with my family and doing activities that make me feel good.*

Can you comment or make suggestions regarding the Hope Enhancement Workshop, the materials provided at the workshop, or the workshop surveys?

*I thought it was a very revealing workshop that really made me think more about where hope comes from and how to achieve it.*

TABLE A2. Thought-Provoking Comments From Oncologists

**Post-workshop assessment**

Was the workshop what you expected when you agreed to participate?

*No, I wasn't sure what to expect but I definitely did not expect it to involve personal goals.*

*No, I thought it would be more centered on fostering patient-specific hope.*

*However, I found it useful regardless.*

Did any aspect of the workshop make you uncomfortable?

*Sharing the item to work on was a bit uncomfortable - found I chose a safe item.*

*Writing out my goals/obstacles and discussing with peers.*

Will you implement hopefulness concepts into your clinical interaction with patients?

*Perhaps, though it may be difficult.*

*Yes. In a more formal and structured way than in the past.*

*Yes, although I think this could be a good follow-up workshop topic, still not quite sure how I will do this.*

*I think I need some materials to better and efficiently do goal setting.*

**3-month assessment**

Would you care to elaborate on how you used/why you did not use the hope concepts in your personal life?

*I followed the algorithm. This worked well for a little while, but then I slipped up.*

*Refresher might be helpful.*

*Too busy to set intermediate- to long-term goals.*

*I have not made the time yet.*

Would you care to elaborate on how you used/why you did not use the Hope concepts in your clinical practice?

*Soon after I have discussed the concepts with several patients. I have to admit that as time went on, I used it less.*

*Provides a good framework for discussions with patients around goals of care.*

*Did not think of it in the clinical encounter.*