

# Intuitive. Informative. Integrative.

oncology solutions.



As cancer care becomes more individualised many cancer patients are looking for methods to actively create their own treatment regimens. These complementary and alternative medical interventions have mainly ushered in with the confluence of innovative ideas and qualified service providers, most pronounced being in nutrition and lifestyle-induced disorders. Integrative oncology, as it is presently known, is "A patient-centred, evidence-informed discipline of cancer care that integrates mind-body practices, and/or lifestyle adjustments with traditional cancer therapies."

Patients give a wide range of justifications for choosing complementary therapies, such as hope, control over their care, and conviction in its efficacy. However, despite the rising popularity of complementary treatments, there is a lack of information regarding their usage among oncology professionals as well as patients.

Integrative oncology (IO) seeks to engage patients and families as active participants to build their own ecosystem of care, treatment, and survivorship. This holistic approach optimizes health outcomes and proactively manages symptoms and adverse effects of cancer or its treatment.

To provide appropriate (IO) treatments alongside traditional care, patient support platforms stress safety and patient feedback loop as their best available evidence. The support services and self-reported patient outcomes are intended to generate evidence for improving health, quality of life, and clinical outcomes across the cancer care continuum that enable patients to take an active role in their healthcare before, during, and after cancer treatment.

## Importance of the Patient Perspective

It is more important to know what sort of person has a disease than to know what sort of disease a person has

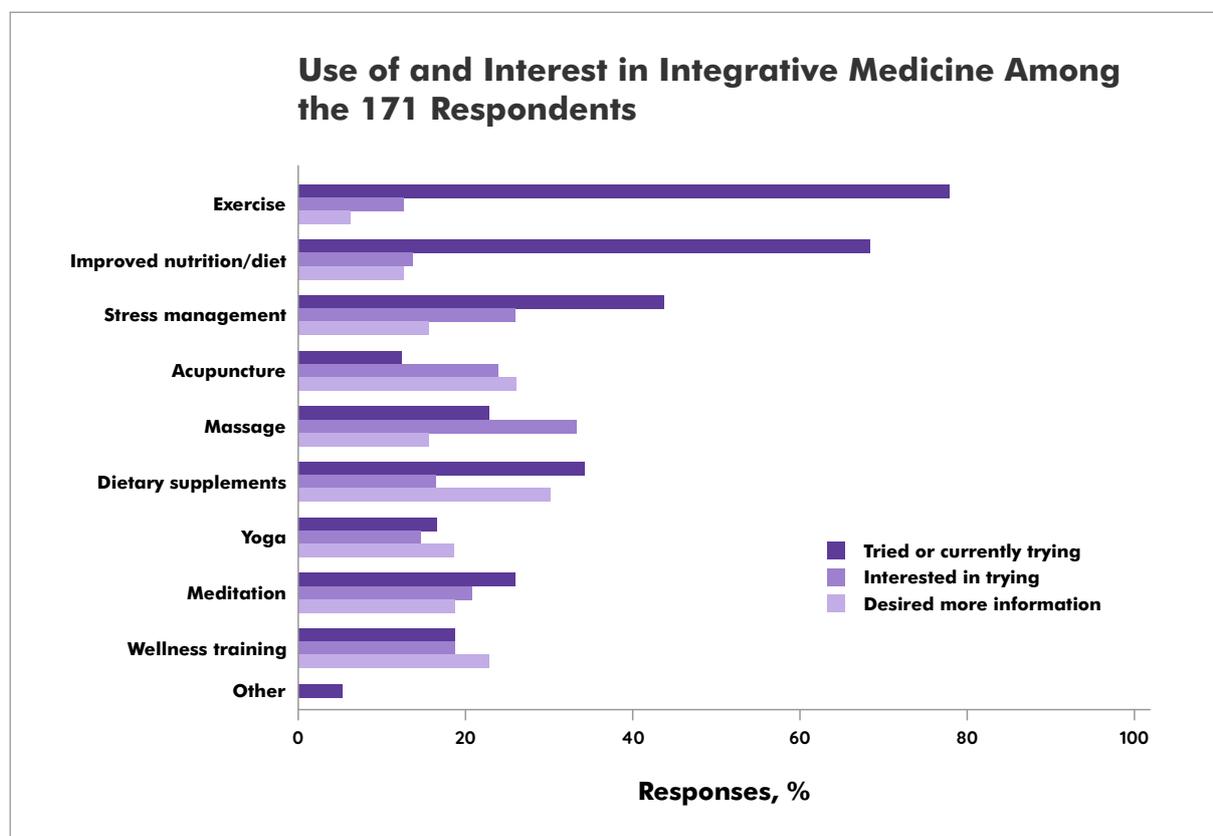
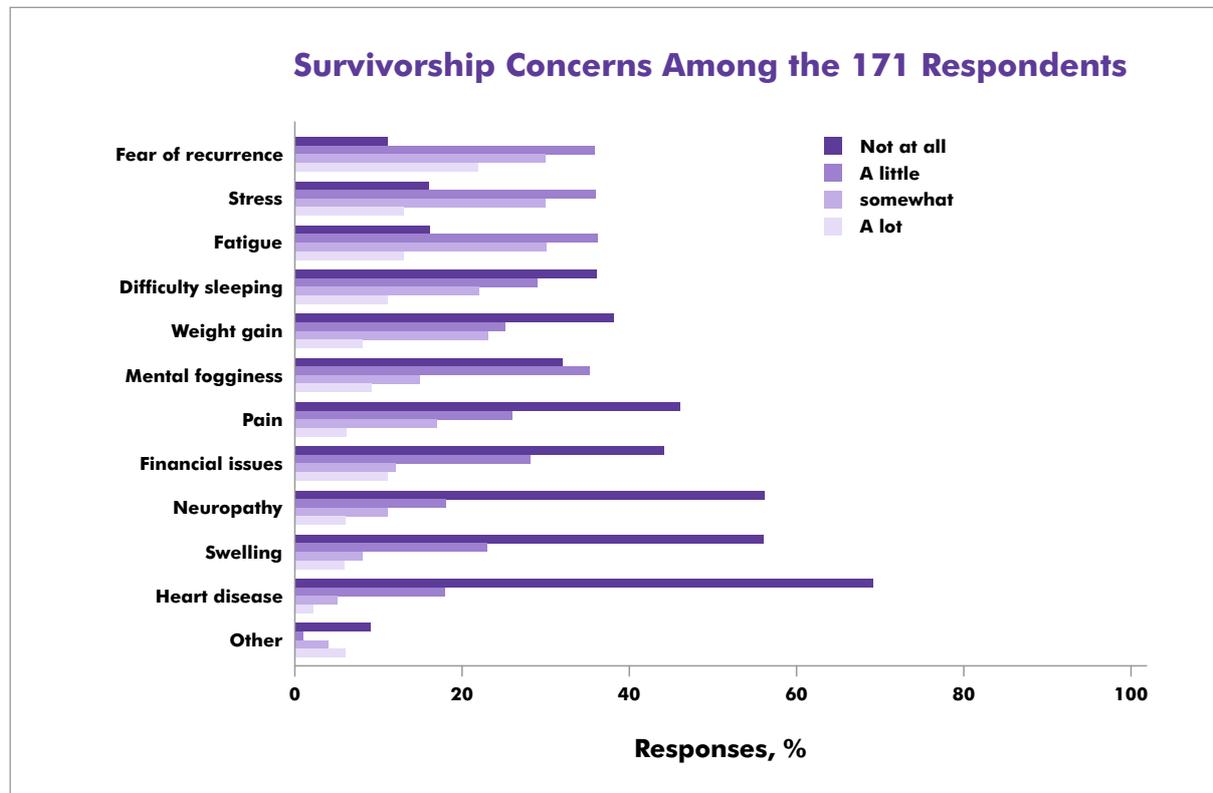
Hippocrates



## What is Integrative Oncology?

- The rational, evidence-based combination of conventional therapy with complementary interventions into an individualized therapeutic regimen that addresses the whole person (Body, Mind and Spirit) with cancer.
- A science and philosophy that focus on the complex health of people with cancer and proposes an array of approaches to accompany the conventional therapies of surgery, chemotherapy, molecular therapeutics, and radiotherapy to facilitate health.

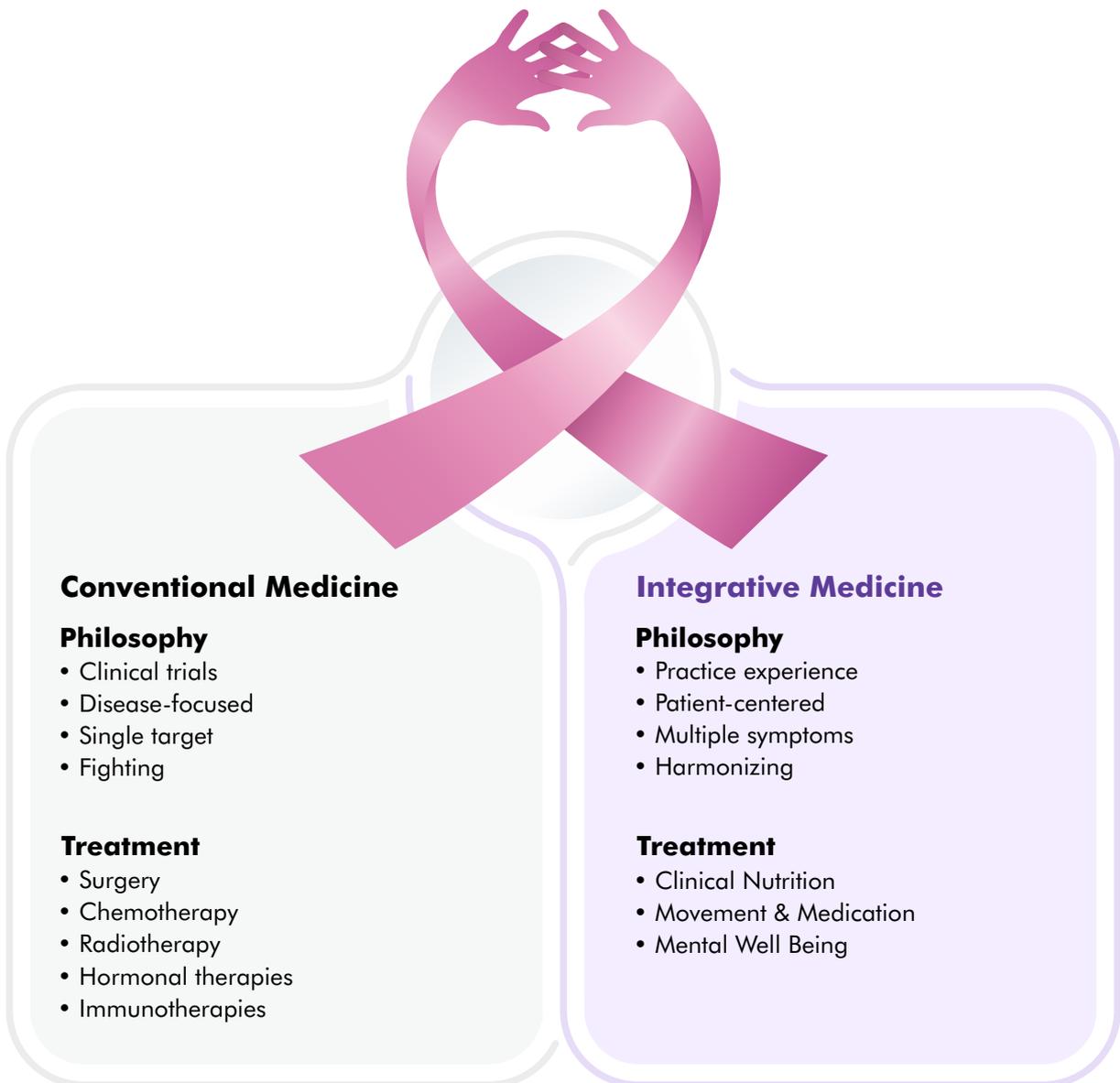
# Symptom Burden and Integrative Medicine in Cancer Survivorship



Support Care Cancer. 2015 October; 23(10): 2989-2994: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4552597>

Years after fighting cancer, cancer survivors still experience negative side effects. They engage and show interest in a variety of integrative medicine (IM) symptom management strategies. Oncology professionals should assist cancer survivors in addressing persistent health issues. Access to evidence-based IM methods as well as education about them plays a crucial role in cancer survival programs.

Cancer not only affects the concerned person but all aspects of the individual, including their family and social presence. While conventional medication is the mainstay of treatment in oncology, many patients might still prefer to use lifestyle therapies while undergoing treatment.



# Cancer patients are not machines to be fixed but people that need to be healed

Therefore, regardless of where a patient is in their cancer journey, healthcare practitioners must concentrate on combining the three pillars of a healthy lifestyle - nutrition, physical exercise, and mental health - into the patient's treatment plan.

## Diet as Drug:



In the early days of cancer therapeutics, risk assessment was more clinical. Nowadays, you can use the patient's genetic data for risk assessment via clinical pharmacogenetics. Ongoing studies are trying to validate how patients metabolise the drug and its impact on drug response. One of

the most interesting studies in cancer is studying combining diets with drugs.

This nutritional science is not voodoo; rather, it is based on extensive scientific research that has demonstrated how specific diets that exclude or supplement certain chemicals have a positive synergistic effect with medications.

Besides chemotherapy, radiation, surgery, and immunotherapy - the four pillars of anti-cancer therapy - the fifth pillar is where we treat diet as a drug. That's what we now refer to as an independent pillar.

Dr. Siddhartha Mukherjee and colleagues noticed that a high proportion of patients in one of the original trials had become diabetic, and after initially dismissing this as a drug side-effect, they began to investigate. They discovered the drug was interfering with one of the body's primary metabolic circuits, causing a spike in insulin production, which had the effect of reactivating the mutated genetic pathway that was helping cancer cells proliferate and spread.

"It may be the central reason we don't get effectiveness," said Mukherjee.

The trial, which is initially recruiting 40 patients, is the first in a series of similar interventions being planned at other centres in the US and Europe by members of a new international working group focused on "rethinking human diets for cancer," said Mukherjee, who is best known for writing the Pulitzer Prize-winning book *The Emperor of All Maladies: A Biography of Cancer*.<sup>1</sup>

The trial will be among the first to investigate whether diet can be used to boost the effectiveness of drugs.

Furthermore, Vousden's work has shown that cancer cells disproportionately depend on dietary sources of an amino acid called serine. Healthy cells can produce their own serine, but cancer cells are less capable of doing this, and animal studies have shown that cutting dietary intake of the substance makes cancer more vulnerable to drugs.



**“ You could have two different diets, equal in terms of energy, but with two very different effects on the cancer ”**



Serine is present in most dietary protein, so if clinical evidence supported such an intervention in the future, this might mean patients being placed on an extremely low-protein diet supplemented with a serine-free protein shake.



"The holy grail is finding something that cancer cells are uniquely dependent on," said Hannon. "By depriving them of that resource, it makes them more vulnerable to things that we already use to treat patients."<sup>2</sup>

For cancer survivors, lifestyle factors are relevant in reducing morbidity related to the late effects of their disease and its treatment. Patients are often reluctant to discuss these therapies with their oncologists, and oncologists may have limited knowledge and confidence to advise patients on the appropriate use. Communication with patients regarding complementary and integrative therapies and with complementary providers is integral to patient-centred cancer care. One of the keys to a successful integrative approach is listening to the patients. There are several ways an individual can improve the mind and body battle with cancer, but patients have preferences and limitations in what they can achieve while undergoing cancer treatment.

There is a growing body of evidence that nowadays promulgates adding complementary and lifestyle approaches to conventional oncology treatment for benefiting patients by helping them manage the side effects of treatment, improving patient-reported outcomes, and contributing to improved overall survival.

**The SIO Clinical Practice Guidelines are the only comprehensive, evidence-based guidelines for incorporating complementary and integrative therapies into conventional oncology clinical practice.<sup>3</sup>**

**In life sciences, we have brilliant people. We have technology and deep science. But what we often don't have, is deep patient insight. We really have an opportunity now to build that in by creating an end-to-end partnership with patients.**



It is imperative that all practitioners concerned with cancer patients have the knowledge and skills to design personalised programs that wisely support patients through their anti-cancer therapies. The guidelines clearly advocate evidence-based complementary therapies that support patients through their standard anti-cancer treatment, help reduce adverse effects, and improve their quality of life.

While there is generally a positive sentiment for an integrative approach to oncology treatment, there is a disconnect in the level of familiarity and perceived usage between patients and oncologists. As a result, leading academic cancer centers such as Memorial Sloan Kettering Cancer Center, MD Anderson Cancer Center, the University of Arizona, and the University of Michigan have ongoing training programs on integrative oncology for physicians, nurses, and allied healthcare providers.

## Integrative Oncology Education Programs and Resources.

University of Michigan Integrative OncologyScholars Program	<a href="https://sites.google.com/umich.edu/ioscholars/home">https://sites.google.com/umich.edu/ioscholars/home</a>
Memorial Sloan Kettering Cancer Centre Integrative Medicine Online Education Courses	<a href="https://www.mskcc.org/departments/division-subspecialty-medicine/integrative-medicine/programs">https://www.mskcc.org/departments/division-subspecialty-medicine/integrative-medicine/programs</a>
MD Anderson Integrative Medicine Conference and Events	<a href="https://www.mdanderson.org/research/departments-labs-institutes/programs-centers/integrative-medicine-program/conferences-events.html">https://www.mdanderson.org/research/departments-labs-institutes/programs-centers/integrative-medicine-program/conferences-events.html</a>
Society of Integrative Oncology Annual Conference and Webinars	<a href="https://integrativeonc.org/">https://integrativeonc.org/</a>
Osher Collaborative for Integrative Medicine	<a href="https://www.oshercollaborative.org/">https://www.oshercollaborative.org/</a>
University of Arizona's Introduction to Integrative Oncology Course	<a href="https://integrativemedicine.arizona.edu/education/online_courses.html">https://integrativemedicine.arizona.edu/education/online_courses.html</a>

Curr. Oncol. 2021, 28, 853-862: <https://www.mdpi.com/1718-7729/28/1/84>

Even the American Society of Clinical Oncology ASCO (2022) modified its recommendations for cancer survivors and their families regarding diet and exercise. The revised guideline aims to offer evidence-based recommendations for anthropometric factors, physical activity, food, and alcohol use for lowering cancer-specific recurrence and overall mortality.

Other topical issues include the relationship between health-related behaviours and comorbidities, long-term sequelae, and patient-reported outcomes (PROs), with attention to enabling survivors' ability to adhere to recommendations.

## Augmenting the Therapeutic Pathway to Improve Patient Outcomes: Compounding Patient Support Programs (PSP) with Personal General Health (PGHD) Monitoring

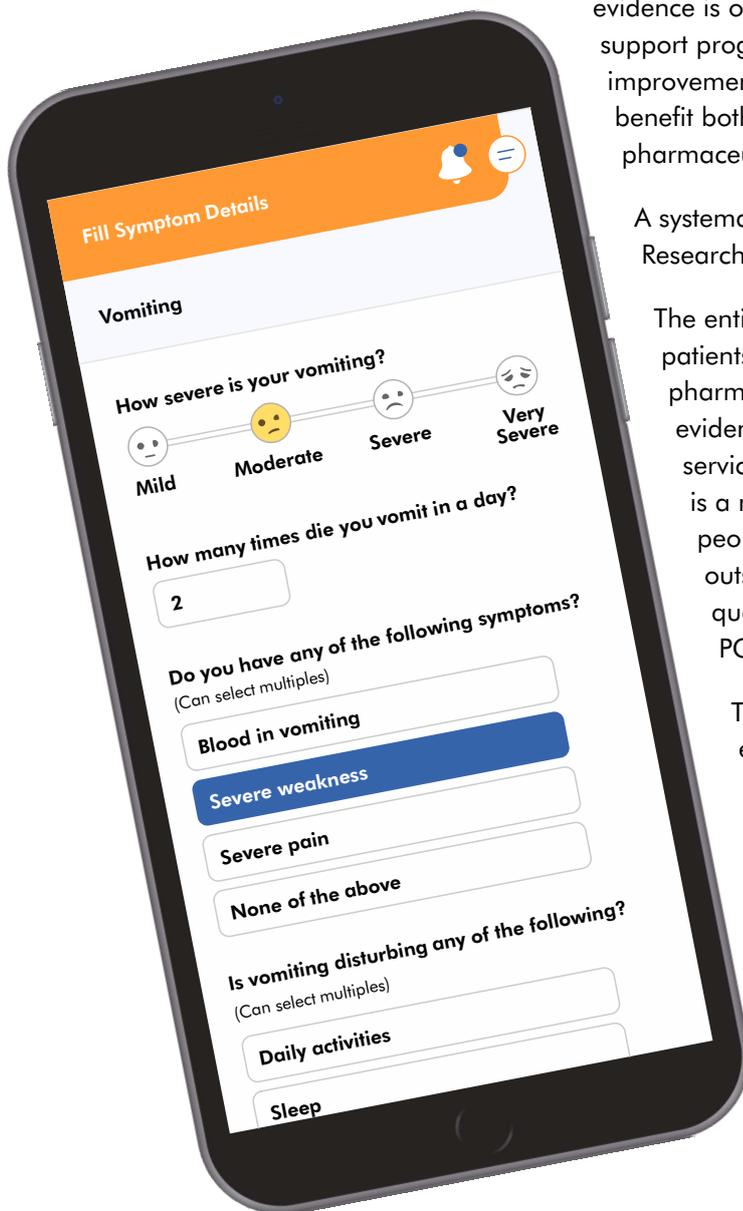
Oncology practices need analytics tools to help them identify patients at higher risk of developing complications or experiencing adverse events. This kind of actionable data can also help practices define pathways to better manage symptoms and complications, which can ultimately help drive better outcomes and lower costs.

**Quality of life and the patient experience are hugely important, and pharmaceutical companies are increasingly being measured on these qualities of life dimensions.** In the US, for instance, in the Affordable Care Act, patient outcomes and patient satisfaction are now key metrics, and the Centre for Medicare & Medicaid Services (CMS) has declared that patient satisfaction is a crucial indicator of value in the new value-based purchasing system. Adherence is another critical factor, especially where patients may not immediately feel treatment benefits. The majority of cancer therapies have unpleasant side effects, and while these may abate over time, patients can often discontinue treatment too early.

Appropriate patient support can help patients through the onboarding and initial treatment period, improve long-term adherence, reduce discontinuation, and ultimately deliver a better health outcome. A personalized support programme significantly increases the probability of patients staying on the regime.

A systematic review of research on patient portals showed that digital patient services could improve patient satisfaction and retention, as well as improve adherence (by up to 37%). In a nutshell, the

evidence is overwhelming and shows that better patient support programs can deliver a significant improvement in patient outcomes and, in doing so, benefit both the health systems and the pharmaceutical companies simultaneously.



A systematic review Kruse et al. 2015 J Med Internet Research 10;17(2):<sup>4</sup>

The entire healthcare ecosystem, including patients, healthcare providers, and pharmaceutical firms, profits from a uniform, evidence-based platform approach to patient services. Person-generated health data (PGHD) is a new type of health data that is created by people via their day-to-day experiences outside of medical facilities. Symptoms and quality of life are frequently self-reported in PGHD.

The value proposition of PGHD is extremely enticing, generating rich insights from personalised care that mitigates some of the inequalities in our current healthcare system and provides the much-needed visibility to clinicians on their patient's health and medical product use between visits.

An important benefit of PGHD over conventional clinic-based assessments is the capacity to collect more longitudinally continuous data as opposed to the episodic "snapshot" nature of traditional clinic-based

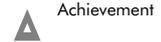
measurements. The benefit of longitudinal data is the robust inference of accurate trends

and trajectories even in the presence of a single noisy measurement, allowing people to trace their journey from baseline to recovery and offering a more individualised (and personal) definition of "better."

Moreover, physicians aided by Patient Reported Outcomes (PROs) and PGHD showed greater expression of being able to practice medicine free from many constraints that had previously hampered the delivery of quality healthcare.

# Health Diary Report

6/6/2021 - 8/22/2021



## Overview

This report is a week-by-week overview of self-reported survey

## Contact

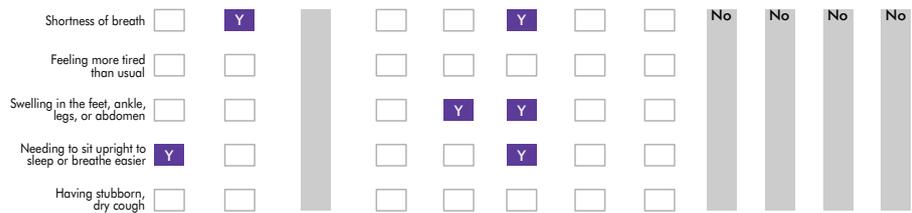
contactus@myachievement.com

Sun Jun 6 Sun Jun 14 Sun Jun 20 Tues Jun 29 Sun Jul 4 Sun Jul 11 Tues Jul 20 Sun Jul 25

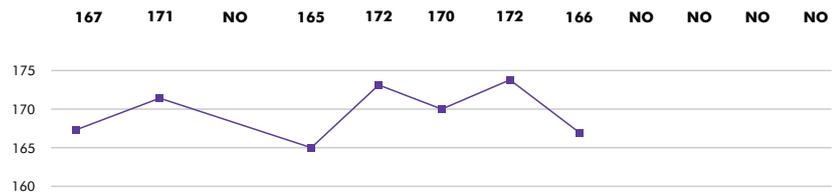
### How are you feeling this week compared to last week?



### Have you experienced new, onset, or worsening of the following in the past week?

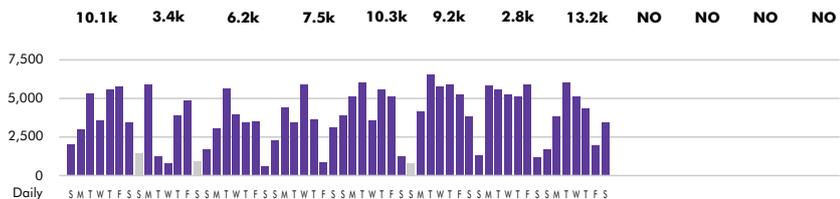


### What is your weight today? (Kgs)



### Activity (steps)

Pedometry data recorded from the patient's device: Apple Watch Series 4



'ND' = No data was entered

Health Diary Report v20210324

Adopted from: <https://evidation.com/resources/next-generation-patient-engagement-enriched-insights>

Life sciences and medtech companies need to build a company culture around the patient experience and the data they're learning about the patient. Data without analysis is just ones and zeros. If you're not looking at the data and acting on that data, it's useless and has no value.



Pharma gets an opportunity and platform to implement its true patient-centric strategy, thus empowering patients to be involved in their treatment and survivability through improved knowledge, access, and funding of complementary and lifestyle treatments.

Numerous recent RCTs are being developed to determine the acceptability and safety of an allied health intervention involving education about nutrition and physical activity combined with behaviour change and social support during adjuvant cancer treatment, which further substantiate this approach via clinical evidence.

## ENhancing Lifestyle Behaviors in Endometrial Cancer (ENABLE): A Pilot Randomized Controlled Trial

Lara Edbrooke, PhD<sup>1,2</sup>, Pearly Khaw, MBBS, FRANZCR<sup>1,2</sup>, Alison Freimund, MBBS<sup>1,2</sup>, Danielle Carpenter, MANP<sup>1</sup>, Orla McNally, MB BAO BCh, FRANZCOG<sup>1,2</sup>, Lynette Joubert, PhD<sup>1,2</sup>, Jenelle Loeliger, MND, AdvADP<sup>1</sup>, Anya Traill, MPH<sup>1</sup>, Karla Gough, PhD<sup>1,2</sup>, Linda Mileskin, MBBS, FRACP<sup>1,2\*</sup>, and Linda Denehy, PhD<sup>1,2\*</sup>

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SAGE

Gastrointestinal Cancer

### Development of a New Tool to Assess the Quality of Life of Patients with Hand–Foot Syndrome Receiving Capecitabine-Based Therapy: A Pilot Study

Prathepa Jagdish<sup>1</sup> Navdeep Kaur<sup>1</sup> Akhil Kapoor<sup>2</sup> Sarika Mandavkar<sup>1</sup> Anant Ramaswamy<sup>2</sup> Vikas Ostwal<sup>2</sup>

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 Address for correspondence: Vikas Ostwal, MD, DM, Department of Medical Oncology, Tata Memorial Hospital, Homi Bhabha National Institute, Mumbai 400012, Maharashtra, India (e-mail: dr.vikas.ostwal@gmail.com).

South Asian J Cancer 2022;11(1):e19–e23.

ARTICLES

https://doi.org/10.1038/s41591-022-01788-1

Check for updates

### Digital remote monitoring plus usual care versus usual care in patients treated with oral anticancer agents: the randomized phase 3 CAPRI trial

Olivier Mir<sup>1,2</sup>, Marie Ferrua<sup>1</sup>, Aude Fourcade<sup>1</sup>, Delphine Mathivon<sup>1,2</sup>, Adeline DufLOT-Boukobza<sup>1,2</sup>, Sarah Dumont<sup>1</sup>, Eric Baudin<sup>1</sup>, Suzette Delalogue<sup>1</sup>, David Malka<sup>1</sup>, Laurence Albiges<sup>1</sup>, Patricia Pautier<sup>1</sup>, Caroline Robert<sup>1</sup>, David Planchard<sup>1</sup>, Stéphane de Botton<sup>1</sup>, Florian Scotté<sup>2</sup>, François Lemare<sup>1</sup>, May Abbas<sup>2</sup>, Marilène Guillet<sup>1</sup>, Vanessa Puglisi<sup>1,2</sup>, Mario Di Palma<sup>1,2</sup> and Etienne Minvielle<sup>2,6</sup>

Springer Link

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Original Article | Published: 29 January 2022

#### Can integrative oncology increase adherence to chemotherapy in advanced gynecologic cancer?

Eran Ben-Arye , Naama Nijk, Ofer Lavie, Orit Gressel, Elad Schiff MD & Noah Samuels

*Supportive Care in Cancer* 30, 4345–4354 (2022) | [Cite this article](#)

146 Accesses | [Metrics](#)

**Conclusion**

Patient-tailored IO programs for patients with advanced gynecological cancer may help preserve adherence to chemotherapy at 6 weeks, especially with taxane-based regimens.

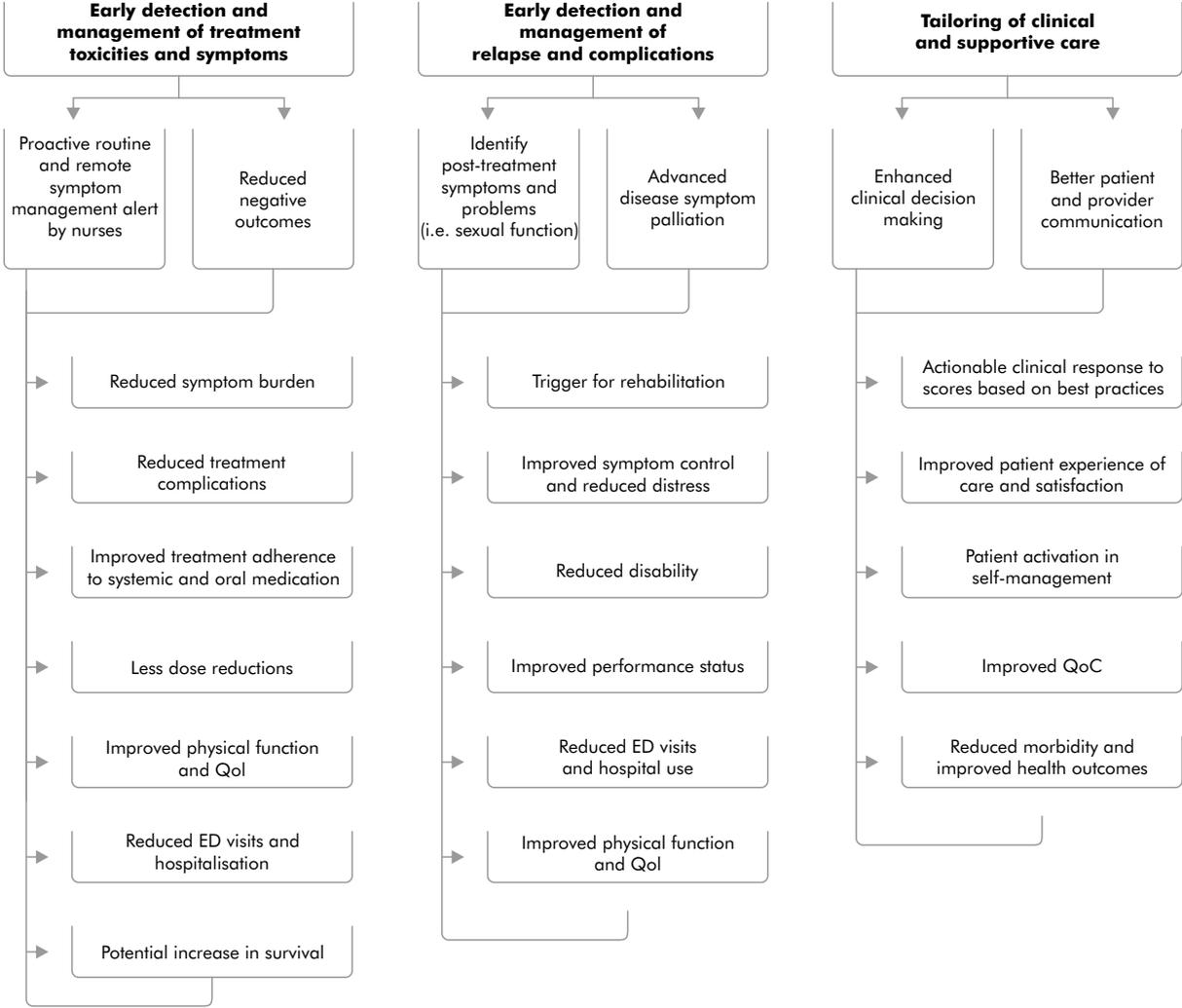
## The International Standards in Analyzing Patient-Reported Outcomes and Quality of Life, Endpoints Data Consortium has been formed to establish PRO analysis recommendations to provide a foundation for endorsement; ongoing developments of these recommendations.

Lancet Oncol 2020; 21: e83-96:  
https://pubmed.ncbi.nlm.nih.gov/32007209/

# Set of Recommendations for PROM Collection in Routine Care

To enable providers to better serve individual patients (e.g., treatment of impaired quality of life) and to facilitate cancer centres to compare their own patient-reported outcomes data with that of others (benchmarking), the task 4 working group of IPAAC work package 10 developed ten recommendations for PROM implementation. The recommendations are meant to support Comprehensive Cancer Care Networks in implementing PROMs in routine care.<sup>5</sup>

## The ESMO Clinical Practice Guidelines: The Role of Patient-reported Outcome Measures in the Continuum of Cancer Clinical Care



Given the demonstrated clinical benefits of digital symptom monitoring with PROMs in clinical practice, oncology practices are increasingly interested in implementing PROMs in clinics for usual care.

## Recommendations:



- Digital symptom monitoring with PROMs in routine clinical care during systemic cancer treatment is recommended, based on evidence of benefits on communication, satisfaction, treatment adherence, symptom control, QoL, emergency room and hospital admissions, and survival [I, A]
- The use of systems that have produced compelling evidence of benefits, such as STAR, PRO-TECT, and electronic patient self-reporting of adverse events (eRAPID), is recommended [I, A]
- PROM questionnaires or items should have demonstrated measurement properties, including validity, reliability, and responsiveness to change [I, A]
- Outcomes assessed by PROMs in clinical care should be meaningful and clinically actionable in the target population [I, A]
- Symptom monitoring with PROMs to manage persisting or new symptoms, such as pain, fatigue, sleep disturbance, distress, depression, sexual health, and cognitive difficulties, can be useful in the post-treatment period of patients with cancer [V, C]
- The use of symptom monitoring with PROMs in patients with cancer near the end of life, which may support symptom control, should be considered [III, C]
- The use of PROMs in survivorship care of patients post-treatment for cancer to improve communication and identify late toxicities, symptoms, or functional impairment warranting supportive care should be considered [V, C]

## Best Practice and Implementation of Proms in The Healthcare System:



- PROM implementation should include engagement with clinic personnel, systematic training, and ongoing monitoring and oversight [III, A]
- PROM implementation should include an initial assessment of barriers for both the clinic (e.g., whether the EMR vendor supports PROMs, availability of clinic resources for responding to alerts) and the patient levels (preferred language(s), availability and comfort with internet access at home, literacy) and socio-cultural context [III, A]
- PROM implementation support should be tailored based on clinic resources and culture, clinical needs and the patient population, and PROM characteristics (e.g., PROMs completed in the waiting room or remotely) [III, A]

The most common barriers and challenges to incorporating PROMS in real-world clinical practice are logistical problems, cumbersome administration, and time constraints. These barriers may be overcome by health information technology and web-based communication, now widely available. Web-based technology permits the immediate transfer of patients' responses to the attending physician's desktop. When used alongside clinical data, the follow-up of patients may be more comprehensive, especially for patients who are not hospitalized.<sup>6</sup>

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CARER, India's first personalized,  
evidence-based nutrition-led  
cancer recovery programme.**

**Believe  
there's  
hope**

Hope puts the healing back in your hands

CARER is a personalised digital onco-health platform that provides cancer patients with customized nutrition and integrative programmes.

The platform uses a quality improvement approach and the evidence-based principles of holistic care. CARER's protocol includes personalised Clinical Nutrition, Physical Therapy in the form of Yoga Therapy and Physiotherapy and Mental Well-being Therapy delivered by highly skilled cancer experts and therapists. CARER has established the concept of integrative oncology by using these non-clinical therapies, which are scientifically proven to improve patient outcomes and QoL.

CARER adopts a patient-centred approach, harnessing technology for the benefit of patients, tailored to their specific and evolving needs, while also taking into account the fundamentally different profiles of patients and caregivers of varying age groups, as well as differences in digital and health literacy. The platform is compliant with data privacy and adherence to HIPAA norms. This approach holds the potential to overcome the limitations of existing systems.

Thus, actively engaging patients and their caregivers towards more effective delivery of supportive care for improving QoL, advancing care planning, patient and caregiver satisfaction, and lowering healthcare utilisation without a negative impact on survival.

## Objectives

- Design a comprehensive, patient-centred intervention for cancer care by adapting and advancing self-reported patient health outcome
- Reduce symptom burden for people living with cancer
- Reinforce patient participation and empowerment in the cancer care pathway
- Provide both in-person and digital intervention (hybrid model) to capture patient insights via qualitative and quantitative observation
- Reinforce pragmatism of the evidence-based (cost-effectiveness) integrative cancer care protocol in cancer management
- Demonstrate the viability of integrating intuitive, informative, and integrative care regimes into the oncology healthcare systems across India



CARER programs support the management of cancer side effects, enhances treatment response, adherence, survival, quality of life, and save healthcare costs. The CARER protocol is created with the assistance of physicians and cancer therapists and is provided at home by leveraging technological advancement of connectivity (hybrid approach). The programs are geared up for all ongoing, post-treatment, rehabilitation, and palliative/end-of-life care of cancer patients. CARER-trained team members are well-equipped with the communication abilities and knowledge necessary to support patients in making decisions.

CARER protocols can be entirely customised and adjusted to the patient's diagnosis, prognosis, history, and lifestyle. The platform promotes long-term lifestyle adjustments while facilitating significant healing and rehabilitation. For cancer patients receiving treatment, the CARER platform aids in managing the signs and symptoms and dealing with the illness, diet, body, and mind. For cancer patients who are not receiving treatment, the platform primarily focuses on full recovery and rehabilitation by boosting the immune system, fortifying the body and mind, and assisting the patient in adjusting to a new normal.

**Pilot research on HNC cancer was carried out by CARER to show the efficacy of the suggested intervention, and the results are being published in the upcoming issue of the Journal of Precision Oncology.** The findings of this pilot study explain the effectiveness of holistic care in patients coping with and recovering from HNC cancer, and they strengthen CARER's promising body of research supporting its cancer care models.



## Comprehensive Integrative Oncology

A fully personalised Integrative Oncology Treatment Plan as well as a variety of Complementary Therapies to reduce side effects of treatment & improve outcomes.

# Case Study: Breast Cancer

Diagnosis:  
**Breast Cancer  
(Her2 Positive)**

Stage: **III**

Age: 47 years

Gender: Female



### Treatment Status:

On treatment: Chemotherapy and radiation therapy (underwent BCS)

### Patient's Complaints / Grievances

Fatigue/weakness, dry mouth, mouth ulcers, weight gain

### CARER Advice:

- She was advised to do oil pulling in order to avoid mouth ulcers and help improve her overall dental health.
- Her carbohydrate intake was reduced from more than 300 g/day to less than 200 g/day due to heavy weight.
- Her vitamin D level was insufficient. Therefore, she was advised to start on a vitamin D supplement (consent from HCP) and vitamin D enriched foods.
- She was advised a high protein diet with plant protein along with protein supplements according to her tolerance level with regular monitoring. She was advised to include fish at least twice or thrice a week as EPA & DHA helps reduce inflammation in the body. She was also encouraged to take nuts and seeds regularly.
- Her diet was infused with cruciferous veggies, which are rich in Sulforaphane known to help in improving immunity and detoxifying the body.

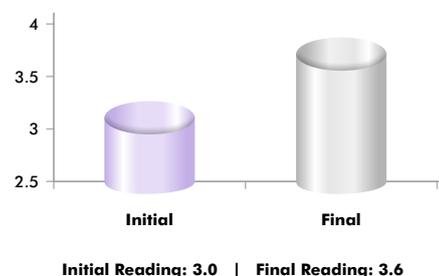
- Yoga sessions were conducted three times a week. Routine walks and pranayama were practiced, along with various breathing techniques, to enhance oxygen levels.
- Physical movement exercises such as upper body strength training, joint movements, and selected mudras were conducted.
- Counselling sessions were provided.
- Selected visualization and breathing exercises were done to reduce anxiety.

### Result

- Eradication of mouth ulcers
- Improvement in gut health
- Reduction in CRP - from 56 to 15
- Reduction in weight - from 87 kg to 81 kg
- Reduction in hip size - from 46" to 44"
- Reduction in waist size - from 38" to 36"
- Reduction in fatigue and weakness from 2 to 3
- Decrease in anxiety and fear of relapse

### QLQ-C30

Results based on QLQC30 readings  
30 Day Program



## Case Study: Prostate Cancer

Diagnosis:  
**Prostate Cancer**

Stage:  
**Not Mentioned**

Age: 87 years

Gender: Male

**Treatment Status:**  
Post-treatment



### Patient's Complaints / Grievances

Low immunity, leg pain, decreased strength and ROM, fatigue, decreased mobility

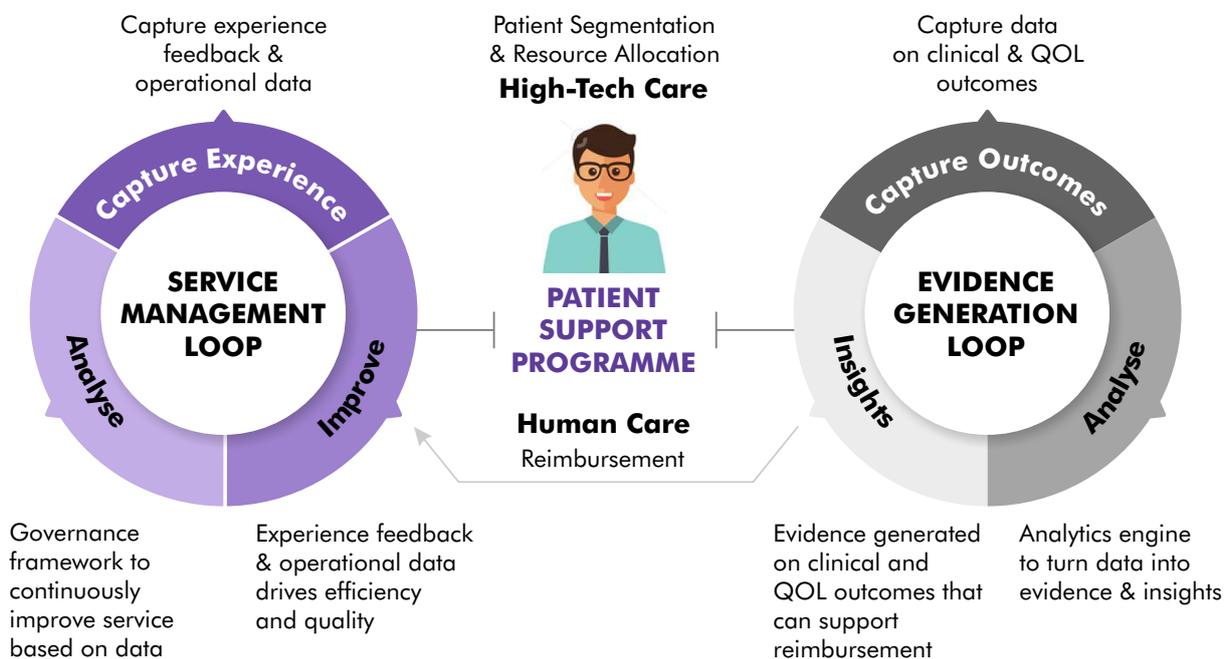
### CARER Advice:

- He was advised small frequent meals high in protein diet (with plant protein) according to tolerance level with regular monitoring.
  - He was suggested to include a variety of pulses and grains in the diet.
  - He was asked to include an intake of fruits and vegetables to support micro-nutrient requirements, along with their phytonutrient/anti-oxidant properties.
  - Specific dietary tips were provided for each pain point, and he was made aware of the benefits of the food/diet plan.
  - Physiotherapy sessions were suggested, including lower body strengthening exercises and focused muscle group leg exercises, to limit atrophy.
- Pain management and pain relief movement techniques were initiated through Physiotherapy and Yoga Therapy.
  - Other exercises were included, such as hip adductor/hip flexor exercises, core strengthening, pelvic stabilisation exercises, and balance training.
  - He was given activities to be implemented daily in order to improve his sleep and anxiety.
  - He observed a sense of self-isolation from family, initiated communication, and focused on purposeful expression, self-identity, and motivation.

### Result

- Increase in the number of short walks
- Improvement in pain levels
- LL & UL strength
- Hip adductors and flexor strength
- Hamstring flexibility
- Improvement in sleep patterns and appetite
- Improvement in bowel movements
- Increase in mobility

**CARER has a continuous plan for ongoing quality improvement, including protocol reviews and research. Future studies will enable machine and artificial intelligence learning algorithms to look at specific QoL metrics and suggest patient-specific drivers of the best self-management.**



It is imperative that as more individuals with cancer use complementary and integrative therapies, and as more research in this field emerges, oncologists should routinely ask their patients about these therapies.

It is essential to recommend evidence-based integrative oncology therapies and separate them from those without adequate evidence to improve multiple aspects of cancer care.

Evidence-based integrative therapies have the potential to improve the quality of life for cancer patients. In fact, several studies have highlighted that an integrative approach is cost-effective.

### Survey and Input

**Amaninder S Dhillon**

Pharma Marketer | 20+ years of Oncology / Super Specialty Experience



**Mr. Rajinder Kaul**  
President India Business: CARER

Clinical research has shown that cancer patients are searching for supplementary methods to enhance their quality of life while undergoing treatment.

In order to empower cancer patients and their caregivers to actively participate before, during, and after cancer treatment, it is crucial for the treating physician to take into account quality of life indicators across the cancer care continuum.

Integrative oncology is a developing, evidence-based field that combines complementary treatments with conventional medical care to increase treatment effectiveness, enhance symptom management, lessen patient anxiety, and lessen suffering.

## Partner with us

CARER has always believed in creating lasting partnerships with hospitals, oncologists, corporates and individuals. We know that nurturing ties is the only way to grow.

### Founder and Director



**Samara Mahindra**  
Founder and Director: CARER

With 10+ years of experience in the field of Integrative Oncology, Samara is a Cancer Exercise Specialist and a Breast Cancer Recovery Trainer. Samara has also received certifications as a Holistic Health Coach from the Institute for Integrative Nutrition, Holistic Cancer Coach from Breastcancer.org, Centre for Advancement in Cancer Education and certification in Plant Based Nutrition from Cornell University and the T. Colin Campbell Foundation.

Due to CARER's impact on Indian healthcare, Samara has been on multiple platforms, a regular TEDx speaker and recognized in the medical fraternity as one of the first reputed companies to introduce integrative and holistic care into mainstream treatment.

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