

# An Oncology Mind-Body Medicine Day Care Clinic: Concept and Case Presentation

Integrative Cancer Therapies  
12(6) 503–507  
© The Author(s) 2013  
Reprints and permissions:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/1534735412473639  
ict.sagepub.com  


Anna Paul, PhD<sup>1</sup>, Holger Cramer, PhD<sup>1</sup>, Romy Lauche, PhD<sup>1</sup>, Nils Altner, PhD<sup>1</sup>, Jost Langhorst, MD<sup>1</sup>, and Gustav J. Dobos, MD<sup>1</sup>

## Abstract

**Introduction.** Cancer diagnosis and treatment are often associated with physical and psychosocial impairments. Many cancer patients request complementary and alternative therapies such as mind-body medicine. **Concept.** The department of internal and integrative medicine at the Essen-Mitte Clinics offer a mind-body medicine day care clinic for cancer patients that is based on the Mindfulness-Based Stress Reduction Program and the mind-body medicine cancer program of the Harvard Mind/Body Medical Institute. The program encompasses mindfulness training, yoga, mindful exercise, nutrition, naturopathic self-help strategies, and cognitive restructuring. **Cases.** Two patients who had participated in the day care clinic program are presented here. One patient presented with anxiety and depression after recently diagnosed breast cancer and the other with psychological impairments as a result of multiple nevi excision after malignant melanoma surgery. Both patients improved in terms of anxiety and further psychological symptoms. **Conclusions.** The Essen-Mitte Clinics mind-body medicine day care clinic appears to alleviate psychological consequences of cancer and its treatment. Further studies and randomized controlled trials are necessary to confirm these results.

## Keywords

neoplasms, mind-body therapies, mindfulness-based stress reduction, case reports, breast neoplasms, melanoma, anxiety

## Introduction

With nearly 12.7 million new cases and 7.6 million deaths in 2008, cancer is still the leading cause of death worldwide.<sup>1</sup> Although survival rates are increasing,<sup>2</sup> cancer diagnosis and treatment are often associated with physical and psychosocial impairments. The most common complaints in cancer patients concern pain, fatigue, depression, and anxiety.<sup>3,4</sup> More than half of all cancer patients report fatigue as a problem,<sup>4,5</sup> and about one-third of patients suffer from mental disorders.<sup>6</sup>

Complementary and alternative medicine is widely used by cancer patients to cope with symptoms of their disease.<sup>7</sup> Because more than 30% of all cancer patients use complementary medicine,<sup>7-9</sup> integrative oncology, that is, the combination of conventional oncology with evidence-based complementary treatment approaches, is an emerging field.<sup>10</sup> Patients do not expect these approaches to cure their disease but mainly use them to strengthen their immune system, relieve pain, or manage treatment-related side effects.<sup>11</sup> Complementary oncological therapies are classified by the Concerted Action for Complementary and Alternative Medicine Assessment in the Cancer Field (CAM-Cancer) as

1. Alternative medical systems (eg, homeopathy, traditional Chinese medicine)
2. Biologically based practices (eg, herbs, vitamins, and food)
3. Energy medicine (eg, reiki)
4. Manipulative and body-based practices (eg, massage)
5. Mind-body medicine (eg, meditation, yoga, and progressive muscle relaxation)<sup>12</sup>

Mind-body medicine is defined as “practices that focus on the interactions among the brain, mind, body, and behavior, with the intent to use the mind to affect physical functioning and promote health”<sup>13</sup> but in a wider sense include lifestyle topics to enhance a person’s capacity for

<sup>1</sup>Department of Internal and Integrative Medicine, Kliniken Essen-Mitte, Faculty of Medicine, University of Duisburg-Essen, Essen, Germany

### Corresponding Author:

Holger Cramer, Kliniken Essen-Mitte, Klinik für Naturheilkunde und Integrative Medizin, Knappschafts-Krankenhaus, Am Deimelsberg 34a, 45276 Essen, Germany.  
Email: h.cramer@kliniken-essen-mitte.de

self-knowledge and self-care, such as exercise, nutrition, relaxation, and self-help strategies.<sup>14</sup>

At the department of internal and integrative medicine, Essen-Mitte Clinics, mind-body medicine is a crucial part of integrative oncology.<sup>10</sup> During the inpatient stay, every patient is routinely offered a consultation with a mind-body medicine instructor for psychooncological and nutrition consultation, education on stress management techniques, and physical exercises.<sup>10</sup> To deepen and consolidate the acquired knowledge and skills, patients are offered participation in an 11-week mind-body medicine day care clinic subsequent to the inpatient stay. This program is open for but not limited to patients who underwent inpatient treatment at the Essen-Mitte Clinics. So far, about 1500 cancer patients have participated in this program.

## The Mind-Body Medicine Day Care Clinic

### Conceptual Framework

The focus of the day care clinic lies in support of coping with the disease and of lifestyle modification. A major issue is the transfer of lifestyle changes into everyday life.<sup>15</sup>

The program is mainly based on the Mindfulness-Based Stress Reduction (MBSR) Program developed by Kabat-Zinn at the University of Massachusetts.<sup>16,17</sup> Mindfulness has been characterized as the core construct of meditation.<sup>17,18</sup> But it also describes the engagement in a special state of consciousness that has been characterized as a non-judgmental moment-to-moment awareness.<sup>19</sup> Therefore, mindfulness-based interventions not only include training in formal practice of mindfulness through meditation and/or mindful exercise but also training in informal practice of mindfulness by retaining a mindful state of consciousness during routine activities in everyday life.<sup>17,20</sup> MBSR is the most commonly used mindfulness-based intervention program.<sup>21,22</sup> MBSR encompasses different mindfulness practices within a structured group program, mainly sitting meditation, walking meditation, hatha yoga, and body scan, a sustained mindfulness practice in which attention is sequentially focused on different parts of the body.<sup>17</sup> Another important component is the practice of mindfulness in everyday life. A number of systematic reviews suggest that MBSR is effective for a variety of psychosocial cancer symptoms, such as stress, depression, anxiety, and reduced quality of life.<sup>23,24</sup>

The day care clinic combines MBSR with elements of the mind-body medicine cancer program of the Benson-Henry Mind/Body Medical Institute at Harvard Medical School, which is rooted in psychoneuroendocrinology and focuses on relaxation techniques, exercise, cognitive restructuring, diet, and social support.<sup>25</sup> In addition to elements of these 2 programs, naturopathic methods of

self-regulation and self-care are incorporated, that is, cataplasms, phytotherapy, massages, and hydrotherapy.

### Structure

The day care clinic program is held by health professionals specially trained in MBSR and psychosocial counseling and delivered in a semiresidential manner for 6 hours once weekly over 11 weeks:

Week 1: At the first meeting, the structure of the program is introduced and patients get to know each other. The patients are introduced to mindfulness and learn the body scan.

Week 2: Naturopathic self-help strategies such as cataplasms, phytotherapy, massages, and hydrotherapy are demonstrated by an integrative oncologist and possibilities and risks of mistletoe therapy<sup>26</sup> are discussed.

Week 3: Patients are introduced to the physiology and psychology of stress and learn mindful strategies to cope with stress. Moreover, gentle yoga postures are introduced.

Week 4: Positive psychology<sup>27</sup> is introduced, and patients are encouraged to explore positive feelings and events. As a relaxation technique, breathing exercises are taught.

Weeks 5 and 6: Irrational or maladaptive patterns of perception and judgment are identified and challenged using methods from cognitive therapy,<sup>28</sup> rational emotive therapy,<sup>29</sup> Beck's cognitive triad of depression,<sup>30</sup> and stress inoculation training.<sup>31</sup>

Week 7: Mediterranean wholefood diet is taught by a specially trained nutritionist and patients prepare a wholefood lunch together. An important focus of this session is the practice of mindful eating.

Week 8: Strategies to cope with negative emotions are introduced and discussed.

Week 9: Although all sessions are rooted in mindfulness, this session as a whole is dedicated to the practice of mindfulness. Sitting, walking meditation, and body scan are practiced, and a silent mindful atmosphere is ensured.

Week 10: Communication styles are discussed. The objective is to develop a mindful nonviolent communication style.<sup>32</sup>

Week 11: The last session concludes the program with retrospection. Patients are encouraged to formulate their goals for the following time and to develop a strategy to achieve these goals.

Each session is complemented by mindful exercise, yoga, or qi gong; mindful meditation or body scan; and/or education on nutrition. During weekly group medical

rounds, patients can discuss their current medical status and their progress over the course of the program with an integrative oncologist. Patients are encouraged to practice formal mindfulness (with the use of additional material such as manuals or CDs) as well as informal mindfulness at home by ensuring a mindful state of consciousness during routine activities. Casual follow up meetings with the group are arranged to help maintain motivation for sustainable lifestyle changes.

### Evaluation

Currently, the day care clinic program is being evaluated in a prospective single-arm cohort study.<sup>33</sup> Outcome measures, including the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ) C30<sup>34</sup> as a measure of quality of life and symptoms and the Hospital Anxiety and Depression Scale (HADS)<sup>35</sup> to assess anxiety and depression along with measures of supposed process variables,<sup>33</sup> are administered to all participants before, immediately after, and 3 months after the end of the group program.

### Cases

#### Case 1: CO

A 47-year-old woman presented after invasive ductal carcinoma along with a large ductal carcinoma in situ (>5 cm) of the left breast. CO had been treated with mastectomy with full axillary dissection and immediate breast reconstruction. Afterward, she was treated with adjuvant chemotherapy (4× AC, 4× DOC + Herceptin). When she started the day care clinic program 4 months postsurgery, she was still taking Herceptin. At this time, she presented clinically important levels of anxiety (a score of 8 in the HADS) and depression (HADS score of 11). CO also suffered from physical consequences of cancer treatment, mainly fatigue (a score of 56 in the EORTC-QLQ C30), dyspnea (EORTC-QLQ C30 score = 67), and diarrhea (EORTC-QLQ C30 score = 67). She reported that through participating in the program, she learned how to relax and to refocus on herself through meditation and self-administered naturopathic cataplasms and massages. During the program, her anxiety and depression resolved, HADS scores dropped to 2 for anxiety and to 5 for depression. She described that she would still perceive cancer as a constant threat but now also as a chance to plan her life in a personally meaningful way based on mindfulness. Her physical complaints ameliorated, fatigue scores dropped to 17, dyspnea scores to 33, and diarrhea scores to 0. Three months after finishing the program, she still continued to practice the relaxation and self-care techniques that she had learned in the day care program.

With suspected cancer recurrence, anxiety again reached clinically meaningful levels (HADS score = 10). However, after a small reconstructive breast surgery during which the suspicion was not confirmed, CO again became nearly anxiety free.

#### Case 2: AK

A 40-year-old woman presented after malignant melanoma at the dorsum of the right foot. Although the melanoma had been excised in toto, AK had to undergo more than 50 excisions of suspicious nevi in the following 5 years. Anxious waiting for histological diagnosis was perceived as a tremendous psychological burden each time. Another bothersome problem was therapy-resistant low-back and neck pain with pronounced scoliosis. She reported impaired role functioning (EORTC-QLQ C30 score = 33) mainly as a result of pain, insomnia (EORTC-QLQ C30 score = 100), and anxiety (HADS score = 12). During the program, she mainly perceived mindfulness training and yoga as helpful. She discovered mindfulness as a way to come into contact with herself again and learned to care for herself through a wholefood diet, regular sauna, and hydrotherapy. She also practiced body scan, sitting meditation, and yoga at home. After the program, role functioning increased (EORTC-QLQ C30 score = 50), and insomnia (EORTC-QLQ C30 score = 67) and anxiety (HADS score = 8) decreased. Her back pain decreased by more than 50%, which she mainly ascribed to her yoga practice. Three months after the end of the program, AK still practiced yoga and mindfulness and also reported to have changed her lifestyle, nutrition, and exercise behavior. She reported further increases in role functioning (EORTC-QLQ C30 score = 67), anxiety reached subclinical levels (HADS score = 6), and decreased pain and insomnia were preserved.

### Conclusions

Mind-body medicine is increasingly requested by cancer patients. The mind-body medicine day care clinic at the Essen-Mitte Clinics combines 2 established mind-body medical programs in a program specifically tailored for cancer patients. Although the 2 cases presented here hint at effectiveness of the program in improving psychological as well as physical health and quality of life in cancer patients, formal studies are needed before the value of the program can conclusively be judged. A currently conducted prospective single-arm cohort study should shed further light on this issue, with results due in 2013. Further randomized controlled studies are planned to compare the mindfulness-based program with other psychosocial programs. Exploring the nature of the patients who gain most from the mind-

body medicine day-care clinic may also prove valuable in the future development of mind-body interventions in cancer care.

### Authors' Note

Anna Paul and Holger Cramer contributed equally to this article and should be considered co-first authors.

### Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

### References

1. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM. *GLOBOCAN 2008 v1.2, cancer incidence and mortality worldwide: IARC Cancer Base No. 10*. Lyon, France: International Agency for Research on Cancer; 2010. <http://globocan.iarc.fr>. Accessed February 16, 2012.
2. Berry DA, Cronin KA, Plevritis SK, et al. Effect of screening and adjuvant therapy on mortality from breast cancer. *N Engl J Med*. 2005;353:1784-1792.
3. Patrick DL, Ferketich SL, Frame PS, et al. National Institutes of Health State-of-the-Science Conference Statement: symptom management in cancer: pain, depression, and fatigue, July 15-17, 2002. *J Natl Cancer Inst*. 2003;95:1110-1117.
4. Cheng KK, Yeung RM. Impact of mood disturbance, sleep disturbance, fatigue and pain among patients receiving cancer therapy [published online July 16, 2012]. *Eur J Cancer Care (Engl)*. doi:10.1111/j.1365-2354.2012.01372.x.
5. Hofman M, Ryan JL, Figueroa-Moseley CD, Jean-Pierre P, Morrow GR. Cancer-related fatigue: the scale of the problem. *Oncologist*. 2007;12(suppl 1):4-10.
6. Singer S, Das-Munshi J, Brähler E. Prevalence of mental health conditions in cancer patients in acute care: a meta-analysis. *Ann Oncol*. 2010;21:925-930.
7. Fouladbakhsh JM, Stommel M. Gender, symptom experience, and use of complementary and alternative medicine practices among cancer survivors in the U.S. cancer population. *Oncol Nurs Forum*. 2010;37:E7-E15.
8. Hyodo I, Amano N, Eguchi K, et al. Nationwide survey on complementary and alternative medicine in cancer patients in Japan. *J Clin Oncol*. 2005;23:2645-2654.
9. Molassiotis A, Fernandez-Ortega P, Pud D, et al. Use of complementary and alternative medicine in cancer patients: a European survey. *Ann Oncol*. 2005;16:655-663.
10. Dobos G, Kümmel S. *Gemeinsam gegen Krebs*. München, Germany: Zabert Sandmann; 2011.
11. Verhoef MJ, Balneaves LG, Boon HS, Vroegindewey A. Reasons for and characteristics associated with complementary and alternative medicine use among adult cancer patients: a systematic review. *Integr Cancer Ther*. 2005;4:274-286.
12. Concerted Action for Complementary and Alternative Medicine Assessment in the Cancer Field (CAM-cancer). <http://www.cam-cancer.org>. Accessed February 16, 2012.
13. National Center for Complementary and Alternative Medicine (NCCAM) <http://nccam.nih.gov/>. Accessed February 19, 2012.
14. Dobos G, Tao I. The model of Western integrative medicine: the role of Chinese medicine. *Chin J Integr Med*. 2011;17:11-20.
15. Paul A, Franken U. Mind/body-medicine, Ordnungstherapie. In: Dobos GJ, Deuse U, Michalsen A, eds. *Chronische Erkrankungen integrative: Konventionelle und komplementäre Therapie*. München, Germany: Urban & Fischer; 2006:331-351.
16. Kabat-Zinn J. An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: theoretical considerations and preliminary results. *Gen Hosp Psychiatry*. 1982;4:33-47.
17. Kabat-Zinn J. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York, NY: Delta Trade Paperback/Bantam Dell; 1990.
18. Gunaratana H. *Mindfulness in Plain English*. Somerville, MA: Wisdom Publications; 2002.
19. Bishop SR, Lau M, Shapiro S, et al. Mindfulness: a proposed operational definition. *Clin Psychol Sci Pract*. 2004;11:230-241.
20. Shapiro SL, Carlson LE, Astin JA, Freedman B. Mechanisms of mindfulness. *J Clin Psychol*. 2006;62:373-386.
21. Baer RA. Mindfulness training as a clinical intervention: a conceptual and empirical review. *Clin Psychol Sci Pract*. 2003;10:125-143.
22. Baer R, Krietemeyer J. Overview of mindfulness and acceptance based treatment approaches. In: Baer R, ed. *Mindfulness Based Treatment Approaches; Clinician's Guide to Evidence Base and Applications*. Burlington, MA: Elsevier Academic Press; 2006:3-27.
23. Shennan C, Payne S, Fenlon D. What is the evidence for the use of mindfulness-based interventions in cancer care? A review. *Psychooncology*. 2011;20:681-697.
24. Cramer H, Lauche R, Paul A, Dobos G. Mindfulness-based stress reduction for breast cancer: a systematic review and meta-analysis. *Curr Oncol*. 2012;5:e329-e342.
25. Benson H, Stuart M. *The Wellness Book: Mind-Body Medicine*. New York, NY: Fireside; 1999.
26. Kienle GS, Kiene H. Review article: influence of *Viscum album L* (European mistletoe) extracts on quality of life in cancer patients: a systematic review of controlled clinical studies. *Integr Cancer Ther*. 2010;9:142-157.
27. Seligmann S. *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfilment*. New York, NY: Free Press; 2002.
28. Beck AT. *Cognitive Therapy and the Emotional Disorders*. New York, NY: International Universities Press; 1975.
29. Ellis A, Dryden W. *The Practice of Rational Emotive Behavior Therapy*. 2nd ed. New York, NY: Springer; 2007.

30. Beck AT, Rush AJ, Shaw BF, Emery G. *Cognitive Therapy of Depression*. New York, NY: Guilford Press; 1979.
31. Meichenbaum D. *Stress Inoculation Training*. New York, NY: Pergamon; 1985.
32. Rosenberg M. *Nonviolent Communication: A Language of Compassion*. Encinitas, CA: Puddledancer; 2001.
33. Paul A, Büssing A, Overhamm T, et al. Effects of a mindfulness-based day-care clinic group program on quality of life, psychological health and coping in cancer patients. In: Cree M, ed. *ECIM Abstract Book*. 2011:133-134.
34. Olsson I, Mykletun A, Dahl AA. The Hospital Anxiety and Depression Rating Scale: a cross-sectional study of psychometrics and case finding abilities in general practice. *BMC Psychiatry*. 2005;5:46.
35. Aaronson NK, Ahmedzai S, Bergman B, et al. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. *J Natl Cancer Inst*. 1993;85:365-376.