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**Purpose:** While studies have demonstrated benefits of hatha yoga for patients with breast cancer, no studies on patients with colorectal cancer are available yet. The purpose of this study was to investigate the effect of hatha yoga in patients with colorectal cancer.

**Methods:** This study was part of a larger multicentre trial. Thirty-six patients with colorectal cancer ( $68.5 \pm 9.4$  years, 38.9% female, UICC stage I-III, 2–48 months post-surgery) were randomized to yoga ( $n = 17$ ) or usual care ( $n = 19$ ). Patients in the yoga group participated in a 10-week traditional hatha yoga program, 90 minutes once weekly, and additional home practice. The program encompassed yoga postures, breathing exercises, and meditation. Outcomes were assessed at 10 and 22 weeks post-randomization and included disease-specific quality of life (FACT-C), spiritual well-being (FACIT-Sp), fatigue (FACIT-F), depression (HADS-D), and anxiety (HADS-A). Semi-standardized interviews were used to retrieve more information on experiences during the yoga program.

**Results:** Generally, baseline values for quality of life were high; baseline values for depression and anxiety were low. Significant group differences were found for depression at 10 weeks only ( $p = 0.046$ ). In qualitative interviews, patients reported good overall health that was not improved much further by the yoga program. The program was perceived as helpful; it improved back pain, body awareness, and flexibility. However, little benefit was perceived for cancer-related symptoms. Patients valued the esteeming and non-striving attitude during classes; practicing together with other patients reduced fear and shame about their physical deficiencies.

**Conclusion:** A 10-week hatha yoga program did not improve quality of life in patients with colorectal cancer. While patients that were up to 4 years post-surgery had little health limitations, they perceived the yoga program as helpful. Hatha yoga might be a valuable adjunct intervention during earlier phases of anticancer treatment. Specific yoga programs should be designed for patients with comparable conditions.

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## P02.40

### Effects of a Mindfulness-Based Day-Care Clinic in Cancer Survivors

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**Purpose:** Physical and mental symptoms are common consequences of cancer diagnosis and treatment. The aim of this study was to investigate the effect of a mindfulness-based day-care

clinic group program on quality of life, cancer-related symptoms, mental health, mindfulness, and interpretation of their illness in cancer patients.

**Methods:** 117 cancer survivors (91.3% female; mean age  $45.1 \pm 10.5$  years; 65% breast cancer; mean time since diagnosis  $27.3 \pm 46.5$  months) participated in an 11-week mindfulness-based day-care clinic group program, 6 hours per week. The intervention incorporated mindfulness-based meditation, yoga, cognitive-behavioral techniques, diet, and lifestyle modification. Outcome measures including quality of life (EORTC QLQ-C30), life satisfaction (BMLSS), depression and anxiety (HADS), mindfulness (FMI), and interpretation of illness (IIQ) were assessed before, immediately after, and at 3 months after the intervention.

**Results:** Using repeated-measures analyses of variance, improvements in global health status ( $p < 0.001$ ), physical functioning ( $p < 0.001$ ), role functioning ( $p < 0.001$ ), emotional functioning ( $p < 0.001$ ), cognitive functioning ( $p = 0.003$ ), social functioning ( $p < 0.001$ ), and life satisfaction ( $p < 0.001$ ) were found. Cancer-related symptoms, including fatigue ( $p = 0.002$ ), insomnia ( $p = 0.024$ ), and constipation ( $p = 0.008$ ) also improved. Anxiety ( $p < 0.001$ ) and depression ( $p < 0.001$ ) decreased; mindfulness ( $p < 0.001$ ) increased. Patients interpreted their disease less as a punishment ( $p = 0.03$ ) but more as something of value ( $p = 0.002$ ). In adjusted post-hoc analyses, all effects were found immediately after the interventions; and all effects except those on cognitive functioning, constipation, and interpretation of illness as punishment were preserved at 3-month follow-up.

**Conclusion:** An 11-week mindfulness-based day-care clinic group program improved quality of life, cancer-related symptoms, and mental health in cancer survivors at the short- and medium-term. Patients' mindfulness was increased, and patients interpreted their illness more positively and less guilt-associated negative. Supportive mindfulness-based interventions can be considered as an effective means to improve cancer patients' physical and mental health.

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## P02.41

### Feasibility of Yoga Skills Training for Improving Outcomes of Gynecologic Surgery

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**Purpose:** Women undergoing surgical procedures for suspected gynecologic malignancies frequently experience pain and psychological distress following surgery. Yoga may reduce these negative surgical outcomes. The primary objective of this pilot study was to assess the feasibility of implementing and evaluating a perioperative brief Yoga Skills Training (YST) in this population.

**Methods:** We recruited adult women who were scheduled to undergo an exploratory laparotomy for suspected gynecologic malignancy. The YST consisted of three 30-minute sessions, one before and two after surgery held in the patient's hospital room. Feasibility (e.g., rate of accrual, adherence, retention) and acute effect of the YST on symptoms (i.e., ratings of pain and distress immediately before and after each YST) were assessed.