addition to the previously published 4 trials,[27-30] showing beneficial effects. The use of yoga for depression and mood disturbance was downgraded from grade A to grade B because of 4 new published studies demonstrating conflicting results.[40,79-81] The use of yoga for improving QOL changed from grade C to grade B, because 2 additional trials demonstrated beneficial effects.[104,128] Finally, new trials on the use of yoga[40,80,104] and hypnosis[97,98] for fatigue upgraded previous recommendations from grade I to grade C.

Use of Integrative Therapies for Anxiety/Stress Reduction

Description of anxiety/stress

Patients with cancer may experience stress related to the life changes associated with a cancer diagnosis, both during and after treatment. Under the NCI's Common Terminology Criteria for Adverse Event (CTCAE) psychiatric disorders, anxiety is categorized from grade 1 (mild symptoms and no intervention required) to grade 4 (life-threatening). Stress is often the result of life challenges that exceed the individual's perceived ability to cope and is a common and normal reaction during cancer diagnosis and treatment. This stress is associated with symptoms of anxiety and somatic complaints that can significantly diminish QOL.[302] Patients with anxiety may worry more frequently, have difficulty relaxing, or feel tense. Patients with cancer-related anxiety also may have elevated heart rate, myalgias, headaches, sleep disturbances, changes in appetite, nausea, diarrhea, and difficulty concentrating. The percentage of patients with breast cancer who report anxiety ranges from 12% to 47%, and approximately 11% to 16% of patients experience combined symptoms of anxiety and depression.[303-305] Evidence suggests that effective anxiety management is associated with improvements in QOL, psychological adjustment, understanding of the disease, decision making, and adherence to treatment.[306-308]

Meditation (A grade)

Overview of meditation interventions for anxiety/stress reduction. Meditation is recommended for reducing anxiety in patients with breast cancer, including during radiation therapy (grade A). Many uncontrolled trials have been published, but this recommendation is based on 5 RCTs completed between 2009 and 2013 that used meditation to reduce anxiety symptoms (see Supporting Information Table 2).[26-30] Anxiety was the primary outcome for 4 of those trials. In all 5 studies, a meditation intervention was compared with a usual-care control condition. Study participants included women undergoing radiation or chemotherapy, breast cancer survivors who had completed treatment, and older adult breast cancer survivors ages 50 years and older. The study sample sizes ranged from 49 to 336 participants. Among these trials, 3 types of meditation interventions were tested. Three trials implemented an intensive, integrated MBSR program customized for patients with breast cancer in which participants were trained in mindfulness meditation and gentle yoga for body awareness.[26,29,30] A fourth intervention was called the Mindful Movement Program and was also an intensive, integrated program customized for patients with breast cancer that included mindful walking/moving, group discussion, exploration of body parts, specific and deliberate movements, moving with intentional effort, active energetic movement, and partner work.[27] The fifth trial assessed a brain wave vibration meditation[28] or a mind/body training technique that combined simple, rhythmic movements with music, action, and positive messages.[26]

A systematic review and meta-analysis examined meditation in terms of its ability to reduce general psychological distress and stress-related health problems in adult clinical populations with a variety of health conditions; that analysis included 47 trials with 3515 participants.[309] Overall, mindfulness meditation programs demonstrated moderate evidence of improved anxiety at 8 weeks and at 3 to 6 months and showed low evidence of improved stress/distress and mental health-related QOL. The findings of these reviews across other patient populations and disease types support our recommendations.

The earliest work in MBSR interventions specifically demonstrated sustained benefits for individuals with anxiety disorders, and more recent research has continued to show a benefit for generalized anxiety.[310-312] The first study conducted in patients with cancer, an RCT of 89 patients with a variety of cancer types, found substantial decreases in anxiety for the group that received MBSR compared with results for a usual-care control group; results for the MBSR interventions were maintained at 6-month follow-up.[313,314] The reduction in anxiety observed in the above-described trials, specifically those that used more traditional forms of MBSR, provide support for the recommendation that meditation can be beneficial for the management of anxiety in women with breast cancer.

A recent systematic review and meta-analysis of 22 studies examined the effect of mindfulness-based therapy specifically on symptoms of anxiety and depression in adult patients with cancer and cancer survivors; of those 22 studies, 21 included either a substantial percentage of patients with breast cancer or only patients with breast cancer.[315] Overall, that review included 12 nonrandomized studies and RCTs. In the nonrandomized studies, mindfulness-based therapy was associated with significantly reduced symptoms of anxiety postintervention with a moderate effect size, while the pooled effects sizes of RCTs, including that discussed above,[29] resulted in a larger effect size ($P < .001$). Although the review reported that overall study quality