Table 2: Controlled clinical trials of qigong for cancer

Source: Ava Lorenc, Rachel Jolliffe, CAM-Cancer Consortium. Qigong [online document]. March 2019.

Outcomes	First author, year, (ref)	Study design	Participants	Interventions	Main outcome measures	Main results	Comments
Mental health	Chan (2013) [23] Conference abstract	RCT	Ninety-six pairs of mixed cancer patients and their caregivers (n=192)	1) 10 session qigong training 2) Waitlist controls	1) Salivary cortisol 2) Perceived stress and sleep quality	Patients – increased cortisol levels after intervention (all p<0.05) Caregivers – no significant changes in salivary cortisol after intervention, flatter diurnal slope at follow up. No reported changes in perceived stress or sleep quality amongst patients or caregivers.	No perceived changes in stress amongst the participants despite reported increased cortisol levels and flatter diurnal slope. Salivary cortisol might be an inappropriate measure of stress following an exercise intervention.
	Myers 2019 [25]	Pilot RCT	Breast cancer survivors (completed treatment 2 months – 8 years ago) (n=50)	1) 8 weekly qigong sessions 2) 8 weekly gentle exercise sessions 3) 8 weekly cancer survivorship support sessions Qigong and exercise groups were asked to practice at home 2x/day.	1) Cognition and quality of life (functional assessment of cancer therapy subscales) 2) Concerns and abilities (Patient reported outcomes measurement system (PROMIS) applied cognition short forms) 3) Fatigue, sleep, distress (MD Anderson Cancer Symptom Inventory) 4) Activity levels (Women's health initiative brief physical activity questionnaire)	The a priori established rates of 75% weekly attendance or home practice were not achieved. Cognitive function and distress improved most for the qigong group compared to the support group (p =0.01; p=0.02). Quality of life improved for all three groups.	This was a pilot study so evidence of effectiveness is limited. High attrition rate. No non-treatment group.

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Outcomes	First author, year, (ref)	Study design	Participants	Interventions	Main outcome measures	Main results	Comments
Various	Lee 2018 [24]	RCT	Cancer survivors (completed all treatment at least one month ago) (n=80)	1) 12 weekly qigong sessions 2) 12 weekly stress management sessions 3) No intervention (control group) All groups received a 2-hour nutrition management session prior to intervention.	1) Cancer-related fatigue (CRF scale) 2) Fear of recurrence (Fear of Cancer Recurrence Inventory) 3) Heart rate variability (CheckMyHeart Handel HRV) 4) Quality of life (FACT-G)	Heart rate variability measures improved significantly in both the qigong and stress management groups compared to control after 12 weeks (HRV overall activity p < .001; total power p =0.001). There were no inter-group differences between qigong and stress management Differences in quality of life and fear of recurrence were not significant.	Powered sample size. Wide range of cancer survival periods up to 14.2 years, and the survival period was significantly shorter in the qigong group (p<0.05). The effects were stronger at 12 weeks than 3 months later, suggesting that participants did not continue to practice at home after the taught sessions.
	Liu (2017) [22]	RCT	Women with breast cancer (n=158)	1) 24 weeks of twice weekly Guolin-Qigong 2) 24 weeks of twice weekly physical stretching program Both taught by instructors and home practice encouraged.	1) Quality of life (primary) (FACT-B) 2) Anxiety and depression (HADS), and clinical indicators (secondary)	Significantly better improvements in the qigong group compared to control for quality of life and emotional wellbeing (both p<0.01), breast-cancer specific wellbeing (p<0.001) and TNF-a levels (p<0.05). No difference in anxiety or depression. The differences were the most significant at the 12-week intervention visit	Powered sample size. Quite high dropout especially in qigong group which is attributed to difficulty practicing qigong. No placebo group, and control group did also show some improvements.
Haemo-dynamics	Fong (2014) [27]	Single-blinded, non-randomized CT	Breast cancer survivors with breast cancer-related lymphedema (n=23)	1) Participants with qigong experience were assigned to a 6 minute Qigong session 2) Participants without qigong experience were assigned to the control group – 6 minutes of quiet rest.	1) Upper limb circumference 2) Arterial resistance and blood flow velocities of affected upper limb	1) Decreased after qigong exercise (p<0.05) but no significant differences between the two groups (p>0.0125). 2) Arterial resistance decreased and blood flow increased after qigong (all p<0.05). Significant between-group differences for arterial resistance (p<0.05) and diastolic blood flow velocity (p<0.001) but not systolic blood flow (p=0.018).	Small sample size, not randomized. There was no follow-up time point in this study to look at the longer-term impact of qigong on these outcomes.