

Table 2: Controlled clinical trials of massage for cancer

Source: Helen Cooke, CAM-Cancer Consortium. [Massage \[online document\]](#), September 2016.

First author (year) [ref]	Outcome	Study design	Participants (number, diagnosis)	Interventions (experimental treatments, control)	Main outcome measures	Main results	Comments
Ovayolu (2014) [24]	QOL and symptoms	RCT	Breast cancer patients receiving chemotherapy (n=280)	Group 1: Inhalation aromatic oils, Group 2: Classic massage only Group 3: Classical massage with aromatherapy Group 4: Control – usual care at the chemotherapy department. All three times a week for 1 month.	Rotterdam Symptom Checklist Quality of life scale	Significant difference found between the control and intervention groups in terms of QoL scale subdomain scores for general well-being, appetite, sexual function (P < 0.001), physical symptoms and activity, and medical interaction. Overall total QoL score averages (P < 0.05). QoL scale showed overall and subdomain score averages decreased over time in control group and increased in the intervention groups. No significant difference between all groups regarding the QoL scale score averages for sleep, perception, social relations, and work performance subdomains (P > 0.05). Aromatherapy massage was found to be especially effective.	No details were given about randomisation process.

Taylor (2014) [26]		RCT (feasibility)	Patients (n=20) with acute myelogenous leukemia.	Participants received fifty minutes of gentle Swedish massage three times a week for seven weeks. Massage therapy was carried out in both acute care and home settings. Control group received usual care.	European Organisation for Research and Treatment for Cancer Care Questionnaire State-Trait Anxiety Inventory Short term McGill Pain Questionnaire	Significant improvements in levels of stress and health-related QoL ($P < 0.001$) were observed in the massage therapy group versus the usual care alone control group.	The relatively small size of the study sample limits generalizability. Participants were not followed up post-intervention to examine the level of symptoms following the intervention and treatment period.
Kashani (2014) [25]	Sleep	RCT	Breast cancer patients (n=57)	Intervention arm – 20 mins of massage 3 times a week for 4 weeks. Control group - usual care.	Pittsburgh Sleep Quality Index	Significant differences ($P < 0.001$) in mean scores of quality of sleep before and after in intervention group. No significant differences ($P > 0.05$) observed in mean scores of quality of sleep before and after the intervention in control group. Significant differences ($P < 0.001$) observed in mean scores of quality of sleep after the intervention between the case and control groups.	The short duration of the intervention (1 month).
Celebioglu (2014) [28]	Pain and anxiety (children)	CT	Children undergoing intrathecal therapy or bone marrow aspiration in children with cancer (n=25)	Children were massaged for 10 -15 minutes immediately before procedure. Control group - standard care.	A visual analogue scale (VAS)	When the pretest and posttest pain and anxiety levels of the groups were compared, no statistically significant difference was found ($P > 0.05$). It was determined that pain and anxiety levels in the experimental group decreased significantly.	Limitations include a small self-selected sample.

RCT: randomised controlled trial, CT: controlled trial, SMD: Standardised mean difference, CI: confidence interval, QoL: quality of life