Table 1: Systematic reviews of acupuncture for chemotherapy-associated nausea and vomiting

Source: Karen Pilkington, CAM Cancer Consortium. Acupuncture for chemotherapy-associated nausea and vomiting [online document]. https://cam-cancer.org/en/acupuncture-chemotherapy-associated-nausea-and-vomiting, 9th March 2021

First author year	Design and methods (searches, quality)	Included studies and participants	Included interventions and main outcomes	Main results/ Conclusions	Comments
Chao 2009	8 databases were searched (English and Chinese) Included controlled and uncontrolled trials Quality assessed using modified Jadad scale.	11 trials (including 9 RCTs) 761 patients with breast cancer	Acupoint stimulation for the management of therapy related adverse events in breast cancer patients	Stimulation of acupoints (mainly P6) reduced nausea and/or vomiting. Jadad scale: 3 studies assessed as high quality; 2 of these used acupressure at P6 and 1 used electro acupuncture at points ST36 and P6.	Concerns about reliability of the conclusions of this review according to DARE assessment.
Chen 2013	16 databases (English and Chinese) were searched to January 2013. Cochrane risk of bias criteria were used for assessment of trials.	Unclear (8 RCTs according to text but references do not match table) 2 or 3 RCTs of acupuncture and 2 RCTs of acupressure (other studies are of moxibustion or injection at acupoints)	Lung cancer; various outcomes (acupoint stimulation as an adjunct therapy for lung cancer)	*'Subgroup analysis showed that acupoint needle insertion, acupoint injection with herbs, and moxibustion significantly attenuated the grade of nausea and vomiting (P = 0.02, P = 0.005, and P = 0.01, respectively). '	**Note: these results cannot be confirmed as studies in the meta-analysis and text do not match table of results. Also the 'herb' injected in one study was vitamin B6 according to the table*
Cheon 2014	11 databases (English, Chinese and Korean) were searched to March 2013 Cochrane risk of bias criteria were used for assessment of trials	5 RCTs on chemotherapy-induced nausea and vomiting (CINV) included in meta-analysis 22 RCTs in total 2,459 patients	Pharmacopuncture* in cancer-related symptoms	'Severity of CINV significantly reduced by pharmacopuncture compared with control group (3 trials, risk ratio (RR) 1.28, 95% confidence interval (CI) = 1.14-1.44). Frequency of CINV also significantly reduced with pharmacopuncture (2 trials, RR 2.47, 95% CI = 2.12-2.89)'	*Note that the treatment involved injecting conventional anti-emetics at acupuncture points.

				All studies had a high risk of bias.	
Ezzo 2006 (Cochrane review) (also published as Ezzo 2005)	9 databases (all English language) plus conference abstracts were searched. Last assessed as up-to-date in 2006. Used 5 criteria for assessment of quality.	11 RCTs 1247 patients	Acupuncture and/or acupressure in chemotherapy-induced nausea and vomiting in adults	'acupuncture-point stimulation of all methods combined reduced the incidence of acute vomiting (RR = 0.82; 95% confidence interval (CI) 0.69 to 0.99; P = 0.04), but not acute or delayed nausea severity compared to control' P6 was the most commonly used acupuncture point. Overall assessment of quality was not reported.	**Note: Review due to be updated in 2014. Authors unable to complete in timescale therefore withdrawn from Cochrane Library*
Garcia 2013	Searched 6 databases (English language) to December 2011. Risk of bias assessed using Cochrane criteria.	11 RCTs on CINV (41 RCTs in total)	Acupuncture in cancer care	'Acupuncture is an appropriate adjunctive treatment for chemotherapy-induced nausea/vomiting, but additional studies are needed.' Between group effect size for acupuncture versus usual care ranged from 0.94 to 1.10. Nonspecific aspects contribute to acupuncture but the specific effects are larger Risk of bias: 8 high risk of bias, 2 unclear risk and 1 with low risk of bias.	
Huang 2017	Searched 8 databases (Chinese and English) and 2 trial registries to February 2017. Risk of bias assessed using Cochrane criteria	16 RCTs 1123 patients	Moxibustion for chemotherapy-induced nausea and vomiting	Moxibustion was reported to be more effective than no treatment (RR: 2.04, 95% CI: 1.42–2.93) or antiemetic drugs (RR: 1.87, 95% CI: 1.27–2.76) but no conclusive evidence on enhancing the effects of antiemetic drugs.	

				Overall risk of bias was not reported but concerns raised with selection bias, lack of blinding and inconsistent data in some trials.	
Jang 2020	Searched 8 databases (English, Korean, Japanese and Chinese) to May 2019. Risk of bias assessed using Cochrane criteria..	2 RCTs on CINV 96 patients with breast cancer	Acupuncture as an adjuvant therapy for management of treatment-related symptoms in breast cancer patients	One trial reported no significant differences between groups in nausea or vomiting. Another trial found a significant difference in the incidence of severe nausea and vomiting. The review concluded there was insufficient evidence. The 2 trials were rated as at unclear risk of bias overall	Note: only two RCTs included (a pilot trial published in 2012 and an RCT published in Chinese)
Momani 2017	Searched 3 English databases (dates not reported) No apparent systematic quality or risk of bias assessment.	21 studies 2 RCTs (1 of acupuncture; 1 of acupressure)	Integrative therapeutic approaches for managing nausea in children being treated for cancer	Little information on the effectiveness and safety in children. One trial of acupuncture was underpowered (n=11) and a trial of acupressure found no difference between sham and true acupressure.	Note: only 2 RCTs included (one published in 2006 and one in 2012)
Song 2015	Searched 12 databases (English, Korean, Chinese, and Japanese) Risk of bias assessed using Cochrane criteria	1 RCT and 1 quasi-RCT on CINV (8 RCTs and 2 quasi-RCTs in total)	Self-acupressure for symptoms of various conditions including cancer	Positive effects reported for primary outcomes of self-acupressure therapy for various symptoms, including significant improvements in nausea and vomiting in cancer Overall assessment of all RCTs: moderate quality, with 50% or more assessed as a low risk of bias in seven domains (CINV RCT assessed as low risk on 4 of 7 domains)	

Tan 2014	Searched 12 databases (Chinese and English) to May 2014 Risk of bias assessed using Cochrane criteria	21 RCTs 1713 patients	Auricular therapy for chemotherapy-induced nausea and vomiting	Meta-analysis was deemed inappropriate due to low quality of studies. Results are reported as percentage of patients in which treatment was effective (for acute CINV 44.44% to 93.33% in the intervention groups and 15% to 91.67% in the control groups; for delayed CINV, 62.96% to 100% and 25% to 100%, respectively). Overall risk of bias not reported but significant methodological flaws were identified and level of evidence judged as low.	
Zhang 2018	Searched 10 databases (Chinese and English) to August 2017 Risk of bias assessed using Cochrane criteria	29 RCTs (for all indications) 8 trials on CINV 851 participants	Moxibustion for alleviating side effects of chemotherapy or radiotherapy	Low-certainty evidence from one study showed reductions in symptom scores for nausea and vomiting (MD −38.57 points, 95% CI −48.67 to −28.47) compared with sham moxibustion. Low-certainty evidence showed that moxibustion plus conventional treatment was associated with lower symptom scores for nausea and vomiting (RR 0.43, 95% CI 0.25 to 0.74; 7 studies, 801participants; I^2 = 19%) Overall risk of bias was high in all the studies on CINV.	