

Table 1: Systematic reviews of acupuncture for cancer-related pain (from 2015 onwards)

Source: Karen Pilkington, CAM Cancer Consortium. Acupuncture for cancer-related pain [online document], September 7th, 2021.

First author year	Design and methods	Main outcomes/focus	Number of studies Type of studies Number of patients	Main results/ Conclusions
Paley 2015 (current Cochrane review; declared stable at November 2020)	CENTRAL, MEDLINE, EMBASE, PsycINFO, AMED, and SPORTDiscus were searched up to July 2015 Assessment using Cochrane Risk of Bias None of the trials had adequate sample sizes and one had adequate blinding.	Acupuncture for cancer pain in adults (any type of invasive acupuncture for pain directly related to cancer not due to pre-existing pathologies or related to treatments)	5 RCTs (285 participants): 2 of electroacupuncture, one of auricular acupuncture and two of acupuncture	Studies were too small for reliable results and too heterogeneous for meta-analysis. None of the studies reported any harm to the participants.
Behzadmehr 2020	4 English databases searched to April 2019. Jadad Scale and JBI tool used to assess the quality. Of 10 RCTs, 3 were high quality (score = 4), 6 moderate quality (score = 3), one low quality (score = 2).	Effect of complementary and alternative medicine interventions (including acupuncture and acupressure) on cancer related pain in breast cancer patients	47 trials and quasi-experimental studies (12 of acupuncture in 904 patients)	<i>The results indicate that, in the majority of the studies (n = 10), acupuncture reduced different types of cancer-related pain (aromatase inhibitor-related pain [n = 6], postoperative pain [n = 3] and chronic cancer related pain.</i>
Chiu 2017	9 English and Asian databases searched to June 2014 Risk of Bias was assessed. No trials were associated with a low risk of bias on all aspects.	Acupuncture for malignancy-related, chemotherapy (CT)- or radiation therapy (RT)-induced, surgery-induced, and hormone therapy (HT)-induced pain	29 RCTs	Overall effect of acupuncture on cancer-related pain was -0.45 [95% CI -0.63 to -0.26]. Acupuncture relieved malignancy-related and surgery-induced pain [effect size -0.71, and -0.40; 95% CI = -0.94 to -0.48, and -0.69 to -0.10] but not CT- or RT-induced and HT-induced pain (-0.05, and -0.64, 95% CI = -0.33 to 0.24, and -1.55 to 0.27). <i>'Acupuncture is effective in relieving cancer-related pain,</i>

				<i>particularly malignancy-related and surgery-induced pain.'</i>
Dai 2021	8 English and Chinese databases searched to August 2020 Risk of bias of RCTs assessed using Cochrane approach; Newcastle-Ottawa scale for non-RCTs Evidence assessed as low quality based on GRADE.	Acupuncture or derived therapy combined with conventional analgesics for pain in palliative cancer management	41 controlled studies with 2685 participants and 18 single-arm studies with 1084 participants	Combined acupuncture and analgesics led to greater reduction in pain scores than analgesics alone (weighted mean difference [WMD]: 1.33 [0.85–1.82], $p < 0.001$).
Dong 2021	7 English and Chinese databases searched to July 2020 Risk of bias assessed using Cochrane criteria No trials were blinded so risk of bias was high.	Wrist-ankle acupuncture and cancer pain	13 RCTs with 1005 cancer patients (wrist-ankle acupuncture alone or wrist-ankle acupuncture plus analgesics, compared with analgesics)	Pain relief rate in the wrist ankle acupuncture group was better than that in the control group (analgesic drug intervention) [RR = 1.31, 95%CI: 1.15 ~ 1.49, $P < 0.01$].
He 2020	7 English and Chinese databases searched to March 2019. Quality of RCTs appraised with the Cochrane risk of bias tool. 6 (or 7?) sham-controlled trials rated as low risk of bias Evidence graded low or moderate quality due to risk of bias and heterogeneity.	Acupuncture and acupressure and cancer pain	17 RCTs (with 1111 patients) were included in the systematic review, and data from 14 RCTs (with 920 patients) in the meta-analysis.	<i>True (compared with sham) acupuncture was associated with reduced pain intensity (mean difference [MD], -1.38 points; 95%CI, -2.13 to -0.64 points; $I^2 = 81%$, 7 RCTs). Acupuncture or acupressure plus analgesic therapy versus analgesia alone for reducing pain intensity (MD, -1.44 points; 95% CI, -1.98 to -0.89; $I^2 = 92%$; 6 RCTs) and reducing opioid dose (MD, -30.00mg morphine equivalent daily dose; 95%CI, -37.5mg to -22.5mg; 2 RCTs).</i>
Hu 2016	8 English and Chinese databases searched up to February 2015 Assessed using Cochrane Risk of Bias and GRADE. All selected RCTs were associated with high risk of bias.	Effectiveness and safety of acupuncture for cancer-related pain	20 RCTs (1,639 participants)	Acupuncture alone was not superior to conventional drug therapy. Acupuncture plus drug therapy compared with drug therapy alone resulted in increased pain remission rate, shorter onset time of pain relief, longer pain-free duration, and better quality of life without serious adverse effects. Quality very low based on GRADE analysis.

<p>Lau 2016</p>	<p>8 English and Chinese databases were searched (search date unclear) Cochrane Risk of Bias used for assessment. Majority of trials had low risk of bias on sequence, incomplete outcome data and selective outcome reporting. Only 1 RCT had low risk of bias for the 2 blinding-related domains</p>	<p>Acupuncture and related therapies for symptom management in palliative cancer care (including cancer pain)</p>	<p>13 RCTs; 8 RCTs on cancer pain (only 2 included in the meta-analysis)</p>	<p>Compared with conventional interventions, acupuncture and related therapies significantly reduced pain (2 studies, n = 175, pooled weighted mean difference: -0.76, 95% CI -0.14 to -0.39) in liver or gastric cancer patients.</p>
<p>Liu 2021</p>	<p>9 English and Chinese databases searched up to November 2019 Cochrane Risk of Bias used for assessment. Four studies judged at high risk of bias on one of the criteria.</p>	<p>Acupuncture for arthralgia caused by aromatase inhibitors</p>	<p>7 trials involving 603 patients</p>	<p>Brief Pain Inventory (BPI) score, significantly differed between the acupuncture and control groups [pain-related interference: MD = -1.89, 95% confidence interval (CI) [-2.99, -0.79], (P = .008), pain severity: MD = -1.57, 95% CI [-2.46, -0.68], (P = .0006), worst pain: MD = -2.31, 95% CI [-3.15, -1.48], (P < .0001)].</p>
<p>Pan 2018</p>	<p>4 databases were searched up to November 2017 Cochrane Risk of Bias was used for assessment No study fulfilled all methodological criteria; 1 attempted blinding</p>	<p>Acupuncture for the reduction of hormone therapy-related side effects in breast cancer patients (including cancer pain)</p>	<p>17 RCTs (810 breast cancer patients); 4 RCTs (152 patients) on cancer pain</p>	<p>No significant differences were observed in... pain... No adverse events were reported in any of the included trials Mean difference -0.01 (-0.70, 0.72). Heterogeneity: 78.8%</p>
<p>Yang 2020</p>	<p>7 English and Chinese databases searched to February 2020. Quality was assessed using guidance in the Cochrane Handbook for Systematic Reviews of Interventions. Two sham-controlled RCTs rated low risk; 7 as unclear risk of bias.</p>	<p>Effects of auricular therapy for cancer pain (acupuncture and acupressure)</p>	<p>9 RCTs involving 783 patients (2 English; 7 Chinese)</p>	<p><i>Auricular therapy combined with drug therapy more effective than drug therapy alone based on effective rate for pain relief (RR = 1.40; 95% CI 1.22, 1.60; 4 studies) and reduced adverse effects rate (RR = 0.46; 95% CI 0.37, 0.58).</i> <i>Auricular acupuncture had superior pain-relieving effects compared with sham (SMD = -1.45; 95% CI -2.80, -0.09; 2 studies). No difference between</i></p>

				<i>auricular therapy and drug therapy (RR = 1.24; 95% CI 0.71, 2.16; 2 studies).</i>
Yang 2021	4 databases to October 2020 Methodological quality of each included study was assessed using the Oxford Centre for Evidence-Based Medicine (OCEBM) 2011 Levels of Evidence. Trials were judged to be level 2 (1 trial), level 3 (2 trials), level 4 (2 trials).	Acupuncture for palliative cancer pain management (palliative care settings only)	5 studies (n=189) <i>Note: states 5 RCTs in abstract but only 1 was an RCT</i>	'Acupuncture may be an effective and safe treatment associated with pain reduction in the palliative care of patients with cancer. Low-level evidence adversely affects the reliability of findings.'