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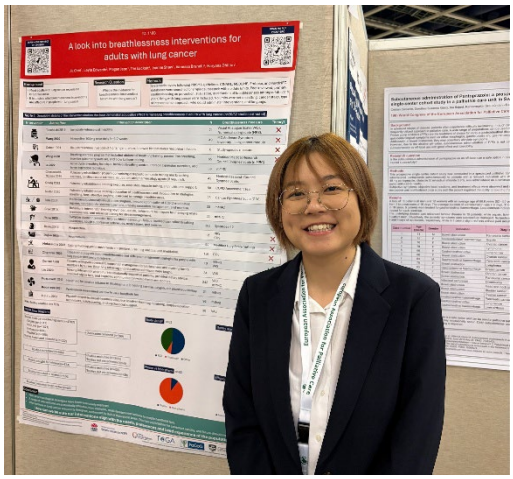
Full Reference: **Jill Chen**, Layla Edwards, Megan Jeon, Vanessa Brunelli, Tim Luckett, Joanne Shaw, Haryana Dhillon*. A systematic review of management strategies for lung cancer-related breathlessness.*
Conference/Meeting Name: 19th World Congress of the European Association for Palliative Care
Location: Helsinki, Finland
Dates: 29-31 May 2025
Presentation Type: Poster



The European Association of Palliative Care's (EAPC) World Congress is a major annual event in Europe that regularly attracts more than 1000 delegates from all over the world. It presents the latest developments in palliative care research and provides updates on issues in the field. I attended this year's EAPC congress to present a poster on the latest results from my systematic review on breathlessness interventions for people with lung cancer.

This year's keynote presentations were focused on advances in palliative care for people with interstitial lung disease (a good summary on evidence-based symptom management in people with ILD); palliative care in high and low-to-middle income countries; paediatric palliative care; AI considerations for palliative care; and palliative care for refugees and migrants. More specifically relevant to my research, there was a session on caring for respiratory problems where I learnt of similar work being done in Denmark and the Life Space tool, an interesting breathlessness measure that moves away from perceptions of distress/symptom severity and instead captures the disabling nature of the symptom.

As can probably be gleaned from the keynote presentations I listed, the key message of this year's congress was to provide equitable and accessible care for all. Clinicians were strongly encouraged to not only be aware of individual and cultural differences/experiences among their patients, but also to meet their unique needs and provide tailored, equitable, holistic care. Researchers were encouraged to engage local communities, not overlook marginalised individuals, and approach research with vulnerable populations with a supportive lens, rather than a paternalistic one.

This message prompted me to reflect on how my research can best serve the diversity of Australia, including the incredibly diverse population of Sydney, a question that I think I will always be searching for an answer to. But it was also a good reminder that this work does not exist in isolation. Through the EAPC congress, I was able to meet (again) with people from the Wolfson Palliative Care Research Centre, based at the University of Hull (UK), and I learnt of more people around the world who are involved in breathlessness research, and how I could potentially build from the advances they made.

A personal highlight for me was being able to visit Helsinki for the first time! The conference's local organisers managed to incorporate some traditional Finnish elements in the conference, from the poetry corner with a Finnish rocking chair, to Finnish music performances, Finnish tango, and even Finnish lollies. Outside of the conference, I really enjoyed visiting the Ateneum Art Museum and Amos Rex.

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A look into breathlessness interventions for adults with lung cancer

SCAN ME FOR PROSPERO

Jill Chen[1], Layla Edwards[2], Megan Jeon[1], Tim Luckett[2], Joanne Shaw[1], Vanessa Brunelli[3], Haryana Dhillon[1].

Background

- Most adults with lung cancer experience breathlessness.
- It is unclear what breathlessness interventions are effective in people with lung cancer.

Research Question

What is the evidence for breathlessness interventions for adults with lung cancer?

Methods

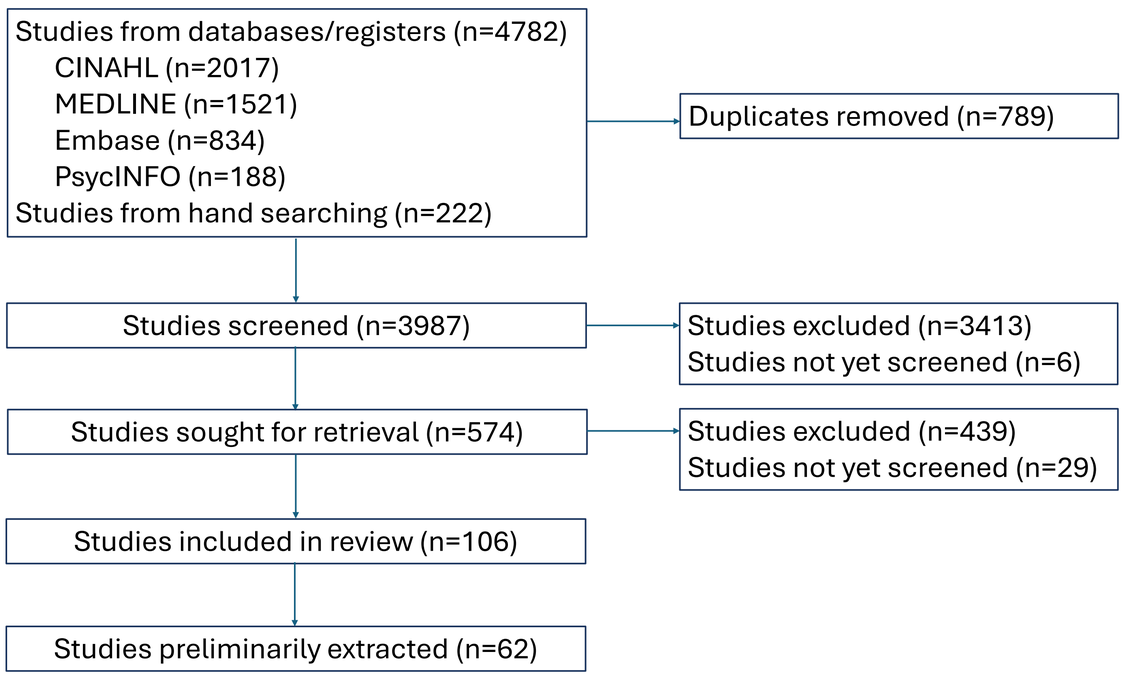
Systematic review following PRISMA guidelines. CINAHL, MEDLINE, Embase, and PsycINFO databases were searched for empirical research with no date limits. Peer-reviewed, primary studies focusing on prevention, alleviation, or reduction of breathlessness among adults (≥18 years) living with lung cancer were included. No limits were set on setting, cancer stage, type of intervention or approach, who could administer interventions, and language.

Table 1. Descriptive details of the intervention studies that have demonstrated positive effect in managing breathlessness in adults with lung cancer (n=20/62 studies extracted)

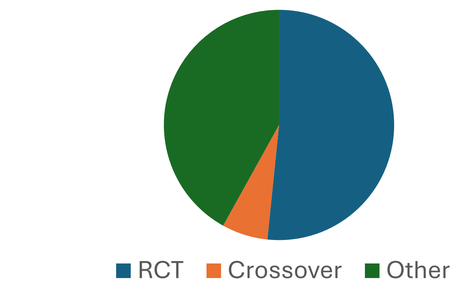
Intervention	Author, Year	Intervention description	N	Breathlessness measure	Theory?
	Takahashi 2019	Immediate-release oral morphine.	71	Visual Analogue Scale (VAS). Numerical rating scale (NRS).	✗
	Wang 2020	Minocycline 100mg twice daily for 6-7 weeks.	49	MD Anderson Symptom Inventory – Lung cancer module	✗
	Cohen 1991	Bolus intravenous injections of 1 or 2mg morphine, followed by continuous morphine infusion.	8	Study-specific measure	✗
	**Wang 2020**	Breathing exercise program that included abdominal breathing training, pursed-lips breathing, incentive spirometry exercises, and blow balloon training.	65	Modified Medical Research Council Dyspnea Scale (mMRC)	✗
	Lu 2022	Active Cycle Breathing Technique. Involves breathing control, thoracic expansion exercises, and forced expiration technique.	68	mMRC	✗
	Chesterfield-Thomas 2016	Pulmonary rehabilitation program comprising of respiratory muscle training and breathing exercises, cardiovascular exercises, education, and pharmacology agents (if required).	42	Medical Research Council Dyspnea Scale.	✗
	Cheng 2022	Pulmonary rehabilitation involving exercise, respiratory muscle training, and nutritional support.	58	COPD Assessment Test	✗
	Saetan 2020	Pulmonary rehabilitation involving education of breathlessness and introduction to strategies (breathing, fans, effective coughing, exercise) to manage breathlessness.	28	Cancer Dyspnoea Scale (CDS)	✓
	Rabe 2021	Home-based pulmonary rehabilitation program. Involved optimisation of COPD medication regimen, depression/anxiety management, smoking cessation management, and exercise.	23	mMRC	✗
	Greer 2015	Behavioural intervention involving psychoeducation, behavioural techniques for managing acute breathlessness, and relaxation training for stress management.	32	mMRC	✗
	**Yorke 2022**	Symptom cluster intervention for breathlessness-cough-fatigue. Involved controlled breathing techniques, cough suppression techniques, acupressure, and exercise.	263	Dyspnoea-12	✓
	Bauml 2016	Acupuncture.	12	NRS CDS	✗
	**Doğan 2020**	Acupressure.	60	Modified Borg Scale (mBorg)	✗
	**Molassiotis 2021**	Qigong involving gentle movements and posture, breathing practice, and meditation.	156	CDS	✗
	**Choratas 2020**	Educational program about breathlessness and different management strategies for people with lung cancer and family caregivers.	19	mBorg VAS	✓
	**Corner 1996**	Patients were given advice and support on management breathlessness and involving family members by nurses. Breathing retraining and relaxation techniques were taught.	34	VAS	✓
	Liu 2020	Nursing intervention where nurses emotionally supported patients, provided dietary advice, provided wigs or hats, and improved communication with patients and doctors.	243	VAS mMRC	✗
	**Puspawati 2017**	Handheld fan used as adjunct to diaphragmatic breathing exercise, oxygen, and pharmacotherapy.	21	mBorg	✗
	Kocatepe 2021	Participants were trained on how to use a handheld fan.	96	mBorg	✗
	Hately 2003	Physiotherapist-led breathlessness clinic that involved breathing retraining, simple relaxation techniques, activity pacing, and psychosocial support.	30	VAS	✗

Note. Bolded studies are RCTs

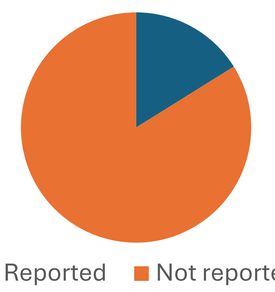
PRISMA Flow Diagram



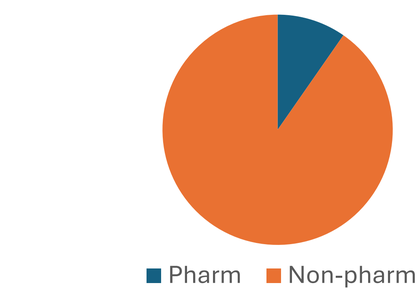
Study design n=62



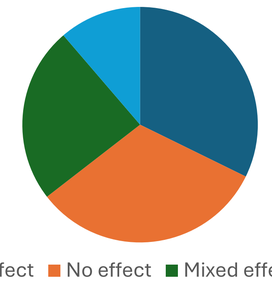
Theory use n=62



Pharm vs Non-pharm n=62



Efficacy n=62



Conclusion

- Non-pharmacological strategies have been extensively explored.
- A range of interventions are potentially effective, from complex, multi-faceted interventions to simple handheld fans.
- Interventions in lung cancer are poorly designed, evidenced by lack of theoretical basis. This has implications for construct validity, and future directions of research.

How can we be sure our interventions align with the needs, preferences and lived experience of the population we aim to help?

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