

INPLASY

Research trend and evidence gap of integrative and complementary medicine for cancer patients in hospice care unit: a bibliometric and scoping review

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 October 2025 and was last updated on 13 October 2025.

INTRODUCTION

Review question / Objective The purpose of this study is to explore the current state of research, the level of evidence, and the existing research gaps regarding palliative care for end-stage cancer patients through complementary, alternative, and integrative medical approaches.

Background Hospice care (palliative care) plays an important role in enhancing the quality of life of advanced or terminal cancer patients by alleviating pain, distress, and other physical and psychological symptoms. As the burden of cancer continues to rise, the demand for effective, patient-centered symptom management strategies has grown substantially. Conventional oncology and palliative medicine have increasingly acknowledged the limitations of pharmacological intervention alone and the potential value of integrative and complementary approaches in end-of-life care.

Complementary and alternative medicine (CAM) and integrative medicine, include a broad range of interventions including acupuncture, herbal medicine, aromatherapy, massage, music therapy, meditation and mind-body therapies which has been used to relieve symptoms and to improve psychosocial well-being of this population. Clinical evidence has gradually accumulated regarding the utility of these interventions in hospice care. For end-of-life care, research evidence supports that CAM interventions such as acupuncture, transcutaneous electrical nerve stimulation, acupressure or massage showed positive effects on pain management and dyspnea but limitations including publication bias and paucity of trials has been suggested [1]. Another review showed clinical evidence on the therapies including acupuncture related interventions, breathing, hypnotherapy, meditation etc. suggested a short-term benefit in symptom improvement only and implied potential limitations in the evidence due to heterogeneity of the included studies and problems in the selection of control groups, high

attrition rate of the participants and small sample size issues [2]. One systematic review (SR) on the evidence of herbal medicine for cancer patient in palliative care suggested that herbal medicine might be effective in pain management, constipation, fatigue, anorexia with infrequent and mild adverse events (AEs) but this evidence is currently uncertain due to small sample size and methodological limitations [3]. Although current evidence remains limited, in the context of end-stage cancer where complete cure is no longer possible, providing CAM interventions with conventional treatments tailored to each patient's individual symptoms offers significant benefits for improving quality of life and supporting patient dignity. Therefore, it is imperative at this stage to explore the existing evidence, identify gaps in that evidence, and investigate potential therapeutic approaches that may enhance the care of terminal cancer patients [4].

Given the rapid growth of research publication on integrative and complementary medicine in end-of-life care, a bibliometric analysis can offer a map on the research trend, collaboration network and thematic evolution which can show overall research status in this area. It can allow to quantify the current statue of evidence, to identify influential studies and to uncover research gaps.

[1] Pan, Cynthia X., et al. "Complementary and alternative medicine in the management of pain, dyspnea, and nausea and vomiting near the end of life: a systematic review." *Journal of pain and symptom management* 20.5 (2000): 374-387.

[2] Zeng, Yvette S., et al. "Complementary and alternative medicine in hospice and palliative care: a systematic review." *Journal of pain and symptom management* 56.5 (2018): 781-794.

[3] Chung, Vincent CH, et al. "Chinese herbal medicine for symptom management in cancer palliative care: systematic review and meta-analysis." *Medicine* 95.7 (2016): e2793.

[4] Frenkel, Moshe, et al. "Integrative medicine: adjunctive element or essential ingredient in palliative and supportive cancer care?." *The Journal of Alternative and Complementary Medicine* 26.9 (2020): 781-785.

Rationale The purpose of this study is to explore the research trends in this field, to identify the limitations of existing and past evidence, and to determine areas where further research is needed.

METHODS

Strategy of data synthesis In this study, the Web of Science database will be searched, including publications up to October 2025. For the sake of

research feasibility, other databases such as PubMed or Embase will not be searched, and gray literature will also be excluded. The following search strategy will be used for literature retrieval.

((("palliative" NEAR/3 (care OR medicine OR service* OR support*)) AND (cancer OR neoplasm* OR oncolog* OR tumor* OR malignan*) AND (("integrative" NEAR/3 (medicine OR oncology)) OR ("complementary" NEAR/3 medicine) OR ("alternative" NEAR/3 medicine) OR ("traditional" NEAR/3 (medicine OR therapy OR practice)) OR "traditional Chinese medicine" OR "Chinese herbal medicine" OR "Korean medicine" OR "traditional Korean medicine" OR Kampo OR "Japanese Kampo" OR acupuncture OR moxibustion OR "herbal medicine" OR phytotherapy OR "mind-body" OR "music therapy" OR "aromatherapy" OR "massage therapy" OR meditation OR yoga OR reiki OR reflexology)).

Eligibility criteria In this study, the following types of research will be included:

Population: End-stage cancer patients

Intervention: Hospice or palliative care combined with integrative medicine or complementary and alternative medicine (CAM), including acupuncture, herbal medicine, aromatherapy, music therapy, massage, and mind-body therapies

Comparator: No specific restrictions

Outcomes: Various indicators such as effectiveness, safety, cost, perceptions, and satisfaction

Study design: No specific limitations on study design; clinical studies (including case reports, observational studies, and randomized controlled trials), surveys, experimental studies, and systematic reviews will all be eligible for inclusion.

Source of evidence screening and selection As this study is a bibliometric analysis, it does not apply strict inclusion or exclusion criteria for the selection of studies.

Data management For bibliometric analysis, basic bibliographic information including title, author, author affiliations, country, source title, publication year, document type, DOI, language will be extracted. In addition, content data of the research including author keywords, keywords plus by the web of science and abstract will be extracted. For citation analysis, citation information including cited references, times cited for each article, cited reference count and citing articles will be extracted. The limitations identified in the most highly cited studies and more recent research to

determine whether they have been addressed or resolved.

Reporting results / Analysis of the evidence

Bibliometric data retrieved from the Web of Science Core Collection were analyzed using the Bibliometrix R package (version 4.1.3) and its web interface Biblioshiny. A full-record dataset, including cited references, author information, keywords, and affiliations, was imported into R for quantitative analysis. Descriptive indicators such as annual publication output, document types, most productive countries, institutions, authors, and journals will be computed. Network analyses will be then performed to explore scientific collaboration (co-authorship among authors, institutions, and countries) and intellectual structure (co-citation and bibliographic coupling). Conceptual and thematic structures will be examined through keyword co-occurrence, thematic mapping, and trend topic analysis to identify emerging and declining research areas in integrative and complementary medicine for end-stage cancer palliative care. To evaluate the current state of evidence, the study plans to extract and analyze the most highly cited research within each study design category. The limitations identified in those studies will then be examined in comparison with more recent research.

Presentation of the results Results will be presented through a combination of statistical summaries, tables, and visual maps generated by Biblioshiny. Temporal publication trends will be displayed as line or bar charts, while geographical productivity and collaboration will be illustrated with world maps and network graphs. Keyword co-occurrence and thematic evolution will be visualized using cluster and trend maps to highlight core and emerging research themes. Co-citation and bibliographic-coupling networks will be represented as density or network diagrams to depict the field's intellectual structure and influential works. All visualizations and summary tables will be organized according to the standard bibliometric reporting framework, facilitating clear interpretation of publication patterns, collaboration networks, and thematic development across the global literature.

Language restriction None.

Country(ies) involved Korea.

Keywords Hospice, Palliative Care, Integrative medicine, Complementary and alternative medicine, bibliometric analysis, research gap.

Contributions of each author

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