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Quality of Life and Psychological Distress Among Patients with Cancer Undergoing Palliative Chemotherapy: Scoping review

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Al-Ghabeesh, S; Al-qaisi, O.

Corresponding author:
Omar Alqaisi

omaralqaisi119@gmail.com

Author Affiliation:
Nursing Department, Al-Zaytoonah University of Jordan, Amman, Jordan.

ADMINISTRATIVE INFORMATION

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Conflicts of interest - The authors declare no financial, personal, or academic conflicts of interest related to this scoping review. No author has any relationship with pharmaceutical companies or other organizations that could inappropriately influence the design, conduct, or reporting of this review.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 May 2026 and was last updated on 17 May 2026.

INTRODUCTION

Review question / Objective The primary review question is: How does palliative-intent chemotherapy influence quality of life (QoL) and psychological distress, including anxiety, depression, and emotional distress, among adult patients with advanced, metastatic, or incurable cancer?

Population (P): Adults (≥18 years) diagnosed with advanced, metastatic, or otherwise incurable malignancies.
Concept (C): The impact of palliative-intent chemotherapy on quality of life and health-related quality of life (QoL/HRQoL) and on psychological distress outcomes (anxiety, depression, emotional distress), assessed using validated instruments.
Context (C): Oncology and palliative care settings in which patients receive palliative-intent chemotherapy (outpatient clinics, oncology wards, palliative care units) across different countries and healthcare systems.

Background Cancer is a leading cause of morbidity and mortality worldwide, with a substantial proportion of patients being diagnosed at advanced, metastatic, or otherwise incurable stages. At these stages, the primary treatment goals shift from cure to symptom control, maintenance of function, and prolongation of life. Palliative-intent chemotherapy is widely used in this context with the aim of reducing tumor burden, alleviating symptoms, stabilizing disease, and extending survival rather than achieving cure.

While palliative chemotherapy can relieve pain, fatigue, and other distressing symptoms, it is also associated with cumulative toxicities, frequent hospital visits, and treatment burden that may compromise quality of life, especially in the last months of life. Quality of life and health-related quality of life are multidimensional constructs encompassing physical, psychological, social, and functional domains of well-being and are key patient-centred outcomes in oncology and palliative care. In parallel, psychological distress, including anxiety and depression, is highly prevalent among patients with advanced cancer and is associated with poorer treatment adherence, higher symptom burden, and reduced global QoL.

Despite the clinical relevance of both QoL and psychological distress in palliative oncology, the literature examining their relationship with palliative-intent chemotherapy is fragmented. Studies vary widely in cancer types, chemotherapy regimens, timing along the disease trajectory, and outcome measures, and relatively few have concurrently evaluated both QoL/HRQoL and psychological distress in the same cohort of adults receiving palliative chemotherapy. A scoping review is therefore warranted to systematically map this diverse body of evidence, clarify key concepts and measurement approaches, and identify gaps that require further investigation.

Rationale Patients with advanced, metastatic, or incurable cancer who receive palliative-intent chemotherapy often experience both substantial physical symptom burden and significant psychological morbidity. However, no comprehensive synthesis has specifically mapped how palliative chemotherapy, as currently delivered in real-world practice, affects both quality of life and psychological distress outcomes concurrently in this population. Existing reviews typically focus on either QoL or psychological distress in isolation, on general palliative care interventions without explicit reference to chemotherapy, or on curative-intent treatment in earlier-stage disease.

Clinicians, patients, and policymakers therefore lack an integrated overview of the evidence on the dual impact of palliative chemotherapy on QoL and psychological distress, including anxiety and depression. Understanding these outcomes is crucial for shared decision-making, realistic prognostic communication, and the design of supportive and palliative care interventions that can mitigate treatment-related burdens.

A scoping review using established methodological frameworks (Arksey and O'Malley; Levac et al.; PRISMA-ScR) is appropriate to map the breadth, nature, and characteristics of the available evidence without applying restrictive quality thresholds. This approach will allow us to summarize how QoL and psychological distress have been conceptualized and measured in the context of palliative chemotherapy, describe reported associations between these outcomes, and highlight conceptual and methodological gaps to guide future research and clinical practice.

METHODS

Strategy of data synthesis A systematic literature search will be conducted in four electronic databases: PubMed, Scopus, ScienceDirect, and CINAHL (Cumulative Index to Nursing and Allied Health Literature). The search will be limited to studies published between 2020 and 2026 and will include peer-reviewed articles in English. The strategy will combine Medical Subject Headings (MeSH) and free-text terms related to: (1) cancer/oncology, (2) palliative chemotherapy or palliative treatment, (3) quality of life or health-related quality of life, and (4) psychological distress, anxiety, or depression, using Boolean operators (AND, OR) to link concepts. Reference lists of included studies will also be screened to identify additional relevant sources.

All retrieved records will be imported into a reference management program, and duplicates will be removed prior to screening. Due to anticipated heterogeneity in study designs, populations, cancer types, chemotherapy regimens, and outcome measures, a narrative, thematic synthesis will be undertaken rather than a quantitative meta-analysis. Data will be charted in standardized extraction tables and synthesized descriptively to address: (1) the impact of palliative chemotherapy on specific QoL domains, (2) the prevalence and severity of psychological distress (anxiety, depression, emotional distress), and (3) the associations between QoL and psychological distress outcomes. Where possible, findings will be organized by study design, cancer type, and country to highlight patterns and contextual differences across the evidence base.

Eligibility criteria Types of participants (Population): Adult patients (aged ≥18 years) with a diagnosis of advanced, metastatic, or incurable cancer receiving palliative-intent systemic chemotherapy or chemoembolization (e.g., transarterial chemoembolization), or integrated palliative chemotherapy protocols. Studies involving mixed-stage populations will be included only if data for advanced/incurable patients can be clearly identified or constitute the majority of the sample.

Concept: Studies must assess both quality of life (QoL or HRQoL) and psychological distress outcomes within the same cohort. Psychological distress may include anxiety, depression, emotional distress, or global distress, measured using validated tools such as HADS, PHQ-9, GAD-7, Distress Thermometer, ESAS, or similar instruments. QoL/HRQoL outcomes must be assessed using validated instruments such as the EORTC QLQ-C30, FACT-G, SF-36, EQ-5D, or comparable measures.

Context: Studies conducted in oncology or palliative care settings (e.g., outpatient clinics, chemotherapy units, palliative care units, hospitals) in any country will be eligible.

Eligible evidence sources: Randomized controlled trials, cohort studies, longitudinal observational studies, cross-sectional studies, other observational designs, and systematic reviews or meta-analyses that report primary data on QoL and psychological distress in adult patients receiving palliative-intent chemotherapy.

Exclusion criteria: Studies focusing solely on general palliative care without chemotherapy; studies of curative-intent chemotherapy in early-stage cancer; pediatric or adolescent populations; caregiver-only studies; non-cancer populations; studies reporting only physical symptoms without psychological outcomes; studies assessing only QoL or only psychological distress but not both; non-peer-reviewed publications (editorials, commentaries, letters, protocols, abstracts, case reports); and non-English-language publications.

Source of evidence screening and selection All records identified through database searches will first undergo automatic and manual removal of duplicates in a reference management software. Screening and selection will proceed in two stages. In stage one, two reviewers will independently screen titles and abstracts of all unique records against the predefined eligibility criteria. Records that clearly do not meet inclusion criteria will be excluded.

In stage two, the same reviewers will independently assess the full texts of potentially eligible articles to confirm final inclusion. Reasons for exclusion at the full-text stage (e.g., curative-intent chemotherapy, absence of QoL or psychological distress outcomes, non-adult populations) will be recorded. Any disagreements between reviewers at either stage will be resolved through discussion and consensus, with involvement of a third reviewer if needed. The overall selection process will be documented in a PRISMA-ScR flow diagram.

Data management Search results will be imported into a reference management software (e.g., EndNote, Mendeley, or similar) for de-duplication and organization. A standardized data extraction form will be developed and piloted by the review team to ensure consistency and completeness. Two reviewers will independently extract data from each included study, including: author, year, country, study design, sample size, cancer type and stage, chemotherapy regimen, QoL and psychological distress instruments used, timing of assessments, and key findings relating to QoL and psychological distress.

Extracted data will be stored in password-protected spreadsheets or databases with restricted access limited to the review team. Discrepancies in extracted data will be resolved by consensus discussion, and, if necessary, consultation with a third reviewer.

Reporting results / Analysis of the evidence Results will be summarized using descriptive statistics (e.g., frequencies, prevalence ranges, and means, where reported) and narrative synthesis. The analysis will focus on mapping how palliative-intent chemotherapy affects QoL domains (physical, emotional, social, role functioning) and describing the prevalence and severity of psychological distress outcomes (anxiety, depression, emotional distress) across studies.

Patterns and trends in the associations between QoL and psychological distress will be explored qualitatively, and where possible, stratified by study design, cancer type, and setting. The review will not conduct a formal risk-of-bias assessment or meta-analysis, in line with scoping review methodology, but will highlight methodological limitations and gaps in the existing evidence.

Presentation of the results Findings will be presented in both tabular and narrative formats. A main summary table will chart key characteristics of included studies, including: first author and year, country, study design, sample size, cancer type and stage, description of palliative-intent chemotherapy, QoL instruments, psychological distress instruments, and main findings regarding QoL and psychological distress.

Additional tables or figures may be used to group studies by cancer type, palliative care model (e.g., integrated palliative care, early palliative care), or geographical region. A PRISMA-ScR flow diagram will illustrate the study selection process, while the narrative text will be organized around thematic sections such as "Impact of palliative chemotherapy on QoL", "Prevalence and severity of psychological distress", and "Associations between QoL and psychological distress".

Language restriction Only studies published in English will be included in this scoping review.

Country(ies) involved Jordan.

Other relevant information This protocol follows the Arksey and O'Malley framework as refined by Levac et al. and will be reported according to PRISMA-ScR and JBI guidance for scoping reviews.

Keywords palliative chemotherapy; advanced cancer; quality of life; health-related quality of life; psychological distress; anxiety; depression; scoping review.

Dissemination plans The findings of this scoping review will be disseminated through publication in a peer-reviewed international journal in the fields of oncology, palliative care, or nursing. Results will also be presented at national and international conferences focusing on oncology, palliative care, and psycho-oncology, and shared with clinicians and stakeholders at Al-Zaytoonah University and affiliated oncology centres to inform clinical practice. Where appropriate, summaries of key findings will be prepared for patients, caregivers, and professional societies to support evidence-based decision-making about palliative chemotherapy and psychosocial care.

Contributions of each author
Author 1 - Suhair Al-Ghabeesh.
Email: s.alghabeesh@zuj.edu.jo
Author 2 - Omar Alqaisi - Author 1 conceived the review, contributed to protocol development, supervised the methodology, and critically revised the manuscript.
Email: omaralqaisi119@gmail.com