DOI:10.31557/RRO.2024.10.2.145

REVIEW

Complete Awareness of Cancer Diagnosis and Prognosis and Its Impact on Survival, Quality of Life, Psychological Outcomes, and End-of-Life Care: A Systematic Review

Tannaz Malakouti[1,2], Maryam Aghajanizadeh[1,2]

[1]Department of Clinical Oncology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. [2]Iranian Society of Clinical Oncology (ISCO), Tehran, Iran.

Abstract

Background: Disclosure of cancer diagnosis and prognosis remains a complex clinical and ethical issue. Although transparent communication may enhance patient autonomy and shared decision-making, concerns remain that complete awareness could increase psychological distress or negatively affect quality of life. Evidence regarding the consequences of diagnostic and prognostic awareness remains inconsistent across cancer types, disease stages, cultural contexts, and definitions of awareness. **Objective:** This systematic review aimed to evaluate the associations between complete awareness of cancer diagnosis and/or prognosis and clinical, psychosocial, quality-of-life, decision-making, and end-of-life outcomes among adults with cancer. **Methods:** A systematic search of PubMed was conducted using keywords related to cancer, diagnostic disclosure, prognostic awareness, illness understanding, treatment-goal understanding, psychological outcomes, quality of life, survival, hospice utilization, and end-of-life care. Studies involving adult patients with cancer that examined diagnostic or prognostic awareness in relation to clinical or psychosocial outcomes were eligible. Empirical studies were included in the primary synthesis, whereas reviews and conceptual articles were used for contextual interpretation. Due to substantial heterogeneity in study populations, awareness definitions, and outcome measures, findings were synthesized narratively. **Results:** Evidence from observational, longitudinal, and interventional studies across diverse geographic regions indicated that diagnostic disclosure was generally not associated with persistent deterioration in quality of life when accompanied by appropriate communication strategies and psychosocial support. Associations between prognostic awareness and outcomes were variable. Several studies reported improved treatment decision-making, advance care planning, hospice utilization, and, in some cases, survival benefits among patients with greater awareness. Conversely, increased anxiety, depressive symptoms, or reduced quality of life were observed in some patients, particularly when awareness was not supported by adequate coping resources, emotional preparation, acceptance, or spiritual well-being. **Conclusion:** Available evidence does not support routine nondisclosure of cancer diagnosis or prognosis based on the assumption that awareness is inherently harmful. The impact of awareness appears to be context-dependent and influenced by communication quality, cultural values, coping mechanisms, emotional preparedness, spiritual well-being, and psychosocial support. Disclosure should therefore be individualized, culturally responsive, gradual, and integrated with supportive care approaches.

Keywords: Cancer; Prognostic awareness; Diagnostic disclosure; Truth-telling; Illness understanding; Quality of life

Rep Radiother Oncol, **10 (2)**, 145-153 Submission Date: 05/14/2024 Acceptance Date: 07/18/2024

Introduction

Disclosure of cancer diagnosis and prognosis represents a fundamental yet ethically challenging aspect of oncology care. Modern oncology practice increasingly emphasizes patient autonomy, informed consent, shared decision-making, and care consistent with patients' values. However, the communication of diagnostic and prognostic information varies considerably across countries, healthcare systems, cultural contexts,

Corresponding Author:
Dr. Maryam Aghajanizadeh
Department of Clinical Oncology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
Iranian Society of Clinical Oncology (ISCO), Tehran, Iran.
Email: m.aghajanizadeh@sbmu.ac.ir

families, and individual clinicians [1-3]. In some societies where family-centered decision-making is prevalent, relatives may request that clinicians delay, modify, or withhold information to protect patients from psychological harm [4-6].

The rationale for transparent disclosure is based on the principle that patients require adequate information to participate meaningfully in treatment decisions, advance care planning, and preparation for future care needs. Nevertheless, the consequences of cancer awareness on patient outcomes remain complex and incompletely understood. Several studies have suggested that greater diagnostic or prognostic awareness may facilitate shared decision-making, advance care planning, timely hospice referral, improved communication, and care that better reflects patients' preferences [7–11]. Conversely, other investigations have reported associations between prognostic awareness and increased psychological distress, anxiety, depressive symptoms, reduced quality of life, or existential suffering in certain patient populations [12-16].

A key challenge in interpreting existing evidence is the lack of a universally accepted definition of "awareness." Diagnostic awareness may range from simple recognition of having cancer to a more comprehensive understanding of disease characteristics. Prognostic awareness encompasses patients' understanding of disease progression, treatment intent, incurability, life expectancy, or terminal status. Recent literature further highlights that prognostic awareness includes both cognitive and emotional components; patients may intellectually recognize the seriousness of their illness while differing substantially in acceptance, coping ability, and emotional preparedness [2, 17]. The concept of peaceful awareness suggests that awareness may contribute positively to patient adaptation when accompanied by acceptance and psychological integration, whereas awareness without adequate emotional support may increase distress [7, 13].

Previous reviews have reported inconsistent relationships between prognostic awareness and health-related quality-of-life outcomes, particularly among patients with advanced cancer [18, 19]. However, an updated synthesis integrating diagnostic awareness, prognostic awareness, survival outcomes, psychological effects, quality of life, decision-making, and end-of-life care across adult cancer populations remains warranted. Therefore, this systematic review aimed to evaluate whether complete awareness of cancer diagnosis and/or prognosis is associated with beneficial, adverse, neutral, or context-dependent outcomes among adults with cancer.

Materials and Methods

Review design

This systematic review was conducted and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [20]. Given the substantial heterogeneity among included studies regarding cancer type, disease stage, definitions of awareness, outcome measures, and cultural contexts, a narrative synthesis approach was applied. Meta-analysis was not performed due to methodological and clinical heterogeneity across studies.

Research question and PECO framework

The research question was formulated as follows: among adult patients with cancer, is complete awareness of diagnosis and/or prognosis, compared with partial awareness, inaccurate understanding, or non-disclosure, associated with differences in survival, quality of life, psychological outcomes, healthcare utilization, treatment decision-making, and end-of-life outcomes?

The review was structured according to the PECO framework:

Population: Adults (≥18 years) diagnosed with any type or stage of cancer.

Exposure: Complete or accurate awareness of cancer diagnosis and/or prognosis, including understanding of diagnosis, disease stage, treatment intent, incurability, terminal status, or limited life expectancy.

Comparator: Partial awareness, inaccurate understanding, non-disclosure, denial, discordant illness perceptions, or lower levels of awareness.

Outcomes: Survival, quality of life, anxiety, depression, psychological distress, existential suffering, spiritual well-being, symptom burden, advance care planning, do-not-resuscitate (DNR) decisions, hospice utilization, end-of-life care intensity, communication outcomes, and treatment decision-making.

Information source and search strategy

A systematic search of PubMed was conducted from database inception to [insert final search date]. The search strategy combined terms related to cancer, diagnostic and prognostic awareness, illness understanding, and patient-centered outcomes.

The complete search strategy is provided in Supplementary Table 2.

The search was restricted to human studies published in English. Earlier landmark studies were retained when they provided foundational evidence regarding the conceptualization of diagnostic or prognostic awareness or reported clinically relevant outcomes.

Eligibility criteria

Studies were eligible if they met the following criteria:

(1) included adult patients with cancer; (2) evaluated diagnostic awareness, prognostic awareness, treatment-goal understanding, illness understanding, or disease-status awareness;

(3) examined at least one clinical, psychosocial, quality-of-life, decision-making, or end-of-life outcome; and (4) were published as full-text peer-reviewed articles in English.

Observational, cohort, cross-sectional, longitudinal, and interventional studies were included. Studies involving pediatric populations, healthcare professionals only, family preferences without patient-level outcomes, conference abstracts without full text, and purely conceptual publications were excluded.

Systematic reviews, scoping reviews, and conceptual articles were used only for background interpretation and were not included in the empirical evidence synthesis.

Study selection

Retrieved records were screened in two stages: title/abstract screening followed by full-text assessment. Studies were evaluated according to the predefined eligibility criteria. Any disagreements regarding study selection were resolved through discussion and consensus.

The study selection process was summarized using a PRISMA flow diagram.

Data extraction

Data extracted from eligible studies included publication characteristics (author and year), country, study design, sample size, cancer type and stage, definition and measurement of awareness, comparator groups, outcome measures, and main findings.

Outcomes were categorized into five domains: survival and end-of-life care, quality of life, psychological outcomes, existential/spiritual outcomes, and treatment decision-making.

Risk of bias assessment

Risk of bias was assessed according to study design. The Newcastle–Ottawa Scale was used for observational cohort and case-control studies, while appropriate validated appraisal tools were applied for cross-sectional and interventional studies.

Risk-of-bias assessments were considered during interpretation of the findings.

Data synthesis

Due to substantial heterogeneity in study populations, awareness definitions, measurement approaches, and outcome assessments, findings were synthesized narratively. Results were organized according to outcome domains, and associations were categorized as favorable, unfavorable, neutral, or mixed/context-dependent.

Results

Study selection

The database search identified 46 records for potential inclusion. After screening of titles and abstracts and assessment of full-text eligibility, 10 records were excluded because they were review articles, scoping reviews, conceptual papers, or did not provide empirical patient-level data. A total of 36 empirical studies met the eligibility criteria and were included in the qualitative synthesis. The study selection process is presented in the PRISMA 2020 flow diagram (Table 1). This systematic review was registered in the International Prospective Register of Systematic Reviews (PROSPERO) under registration.

Characteristics of included studies

The 36 included studies represented diverse geographical regions, including North America, Europe, and multiple Asian countries. The majority of studies were conducted among patients with advanced, metastatic, incurable, or terminal cancer, whereas studies evaluating diagnostic awareness included broader cancer populations.

Table 1. PRISMA Flow Diagram Data

Phase	Description	n
Identification	Records identified from PubMed database	46
	Records removed (duplicates or other reasons)	0
Screening	Records screened (title and abstract)	46
	Records excluded	0
Retrieval	Reports sought for retrieval	46
	Reports not retrieved	0
Eligibility	Full-text reports assessed for eligibility	46
	Reports excluded (Reviews, conceptual/background papers)	10
Included	Studies included in qualitative synthesis	36

The included studies employed various designs, including prospective cohort studies, longitudinal investigations, cross-sectional analyses, observational studies, and quasi-experimental communication interventions. Considerable heterogeneity was observed in the conceptualization and measurement of awareness. Diagnostic awareness was primarily defined as knowledge of having cancer, whereas prognostic awareness included understanding of disease progression, incurability, treatment intent, terminal status, or limited life expectancy.

Detailed characteristics of the included studies are summarized in Table 2.

Diagnostic awareness and patient outcomes

Studies evaluating diagnostic awareness generally indicated that disclosure of cancer diagnosis was not consistently associated with adverse patient outcomes. Several investigations suggested that awareness of diagnosis facilitated communication, informed decision-making, and participation in treatment planning without causing persistent deterioration in quality of life.

However, findings from culturally diverse settings demonstrated that the relationship between awareness and quality of life may vary according to social context, family involvement, and communication practices. Some studies conducted in Asian and Middle Eastern populations reported better physical, emotional, or social quality-of-life outcomes among patients with limited awareness, suggesting that the psychological impact of disclosure may depend on cultural expectations and individual preferences.

Prognostic awareness and psychological outcomes

Evidence regarding prognostic awareness showed substantial heterogeneity. Several studies suggested that accurate understanding of prognosis was associated with improved communication, greater involvement in treatment decisions, advance care planning, and preparation for end-of-life care. In contrast, other studies reported that prognostic awareness was associated with

Table 2. Characteristics of Included Studies Evaluating Diagnostic and Prognostic Awareness among Patients with Cancer

Study	Country	Study design	Population	Awareness construct	Main outcomes evaluated
Ray et al. [7]	USA	Longitudinal cohort	Patients with advanced cancer	Peaceful awareness of terminal illness	Psychological distress, advance care planning, quality of death, caregiver outcomes
Montazeri et al. [21]	UK	Observational methodological study	Patients with lung cancer	Knowledge of cancer diagnosis	Quality of life measurement outcomes
Montazeri et al. [4]	Iran	Observational study	Patients with cancer	Diagnostic disclosure and awareness	Quality of life and psychosocial outcomes
Tang et al. [22]	Taiwan	Observational study	Patients with terminal cancer	Prognostic awareness and patient–family congruence	Quality of life, family burden, preferred place of death
Wright et al. [8]	USA	Prospective cohort	Patients with advanced cancer	End-of-life communication and prognostic discussions	Hospice referral, aggressive end-of-life care, quality of life
Yun et al. [23]	Korea	Prospective cohort	Patients with terminal cancer	Awareness of terminal illness	Survival and healthcare utilization
Lee et al. [24]	Korea	Prospective cohort	Patients with advanced cancer	Awareness of incurable cancer status	Health-related quality of life
Kim et al. [25]	Korea	Observational study	Patients with terminal cancer	Awareness of terminal status	Survival and quality of life
El-Jawahri et al. [12]	USA	Cross-sectional study	Patients with advanced cancer	Prognostic understanding	Quality of life and psychological outcomes
Fisher et al. [26]	Canada	Observational palliative-care study	Patients with palliative cancer	Prognostic awareness	Patient characteristics and awareness-related factors
Aggarwal et al. [27]	India	Cross-sectional study	Patients with lung cancer	Awareness of diagnosis	Quality of life
Tang et al. [13]	Taiwan	Longitudinal study	Patients with terminal cancer	Prognostic awareness and acceptance	Distress, existential suffering, quality of life
Shin et al. [28]	USA	Cross-sectional study	Patients with metastatic breast cancer	Prognostic understanding	Quality of life and mood
Lai et al. [29]	Italy	Observational study	Patients with terminal cancer	Diagnostic/prognostic awareness and spirituality	Spiritual well-being and psychological adaptation
Nipp et al. [14]	USA	Cross-sectional study	Patients with newly diagnosed incurable cancer	Prognostic awareness and coping	Mood, distress, quality of life
Diamond et al. [30]	USA	Observational study	Patients with malignant glioma	Prognostic awareness and communication	Awareness-related communication factors
Chen et al. [31]	Taiwan	Longitudinal study	Patients with terminal cancer	Changes in prognostic awareness	Awareness trajectories
Sato et al. [32]	Japan	Cross-sectional study	Patients with advanced lung cancer and caregivers	Prognostic understanding	Patient and caregiver factors
Shen et al. [10]	USA	Observational study	Patients with advanced cancer	Patient and caregiver prognostic understanding	DNR completion and decision-making
Janssens et al. [33]	Belgium	Multicenter study	Patients with advanced lung cancer	Prognostic understanding	Quality of life
Tang et al. [34]	Taiwan	Longitudinal study	Patients with terminal cancer	Emotional preparedness and prognostic awareness	Distress and quality of life
Chen et al. [35]	Taiwan	Longitudinal study	Patients with advanced/ terminal cancer	Accurate prognostic awareness	Symptom and functional outcomes
Kang et al. [36]	Korea	Cohort study	Patients with advanced cancer	Prognostic awareness	Mood and quality of life changes
Lee et al. [11]	Korea	Prospective cohort	Patients with terminal cancer	Prognostic awareness	Survival and quality of life
George et al. [37]	USA/Taiwan	Longitudinal study	Patients with advanced/ terminal cancer	Changes in prognostic understanding	Psychological well-being
Tang et al. [38]	Taiwan	Longitudinal study	Patients with terminal cancer	Emotional preparedness versus awareness	Psychological adaptation
Arai et al. [39]	Japan	Longitudinal study	Patients with advanced lung cancer	Prognostic understanding	Psychological distress
Ozdemir et al. [15]	Multicountry Asia	Cross-sectional study	Patients with advanced cancer	Prognostic awareness and illness acceptance	Anxiety, depression, spiritual well-being
Satija et al. [40]	India	Cross-sectional study	Patients with advanced cancer	Awareness of advanced disease	Psychological distress and quality of life

Continued Table 2.

Study	Country	Study design	Population	Awareness construct	Main outcomes evaluated
Vlckova et al. [41]	Czech Republic	Cross-sectional study	Patients with incurable advanced cancer	Prognostic awareness	Quality of life
Ozdemir et al. [42]	Multicountry Asia	Longitudinal study	Patients with advanced cancer	Changes in prognostic awareness	Anxiety, depression, quality of life
Chen et al. [16]	Taiwan	Longitudinal study	Patients with terminal cancer	Prognostic-awareness transitions	Depression, anxiety, quality of life
Manalo et al. [5]	Philippines	Cross-sectional study	Patients with stage IV cancer	Awareness of disease extent	Psychological morbidity and social well-being
Putranto et al. [6]	Indonesia	Cross-sectional study	Patients with advanced cancer	Awareness of disease stage and treatment goals	Quality of life, anxiety, depression
Amonoo et al. [17]	USA	Cross-sectional study	Patients with metastatic solid tumors	Cognitive and emotional prognostic awareness	Quality of life and distress
Krueger et al. [43]	USA	Observational study	Advanced cancer patient–caregiver dyads	Prognostic awareness and acceptance	End-of-life care preferences and quality of life

increased anxiety, depressive symptoms, psychological distress, or reduced quality of life.

The negative psychological effects of prognostic awareness appeared particularly relevant when patients lacked emotional preparedness, coping resources, acceptance, or adequate psychosocial support. Conversely, studies examining the multidimensional nature of awareness indicated that emotional acceptance and spiritual well-being may modify the relationship between cognitive understanding of prognosis and psychological outcomes.

Prognostic awareness, survival, and end-of-life outcomes

Several longitudinal and cohort studies investigated associations between prognostic awareness and end-of-life outcomes. Greater awareness was frequently associated with increased engagement in advance care planning, completion of do-not-resuscitate decisions, hospice utilization, and care that was more consistent with patient preferences.

Associations between prognostic awareness and survival outcomes were inconsistent. Some studies reported potential survival benefits associated with awareness and palliative care engagement, whereas others found no significant survival advantage. These differences may reflect variations in cancer stage, healthcare systems, timing of disclosure, and the degree of supportive care available.

Factors influencing the impact of cancer awareness

Across studies, the consequences of diagnostic and prognostic awareness appeared to be influenced by multiple contextual and individual factors. These included communication quality, cultural values, family dynamics, coping strategies, emotional preparedness, spiritual well-being, and patient acceptance of illness.

Overall, the findings suggest that awareness itself is not inherently beneficial or harmful. Rather, its effects depend on how information is communicated, interpreted, and integrated into patients' psychological and social contexts.

Quality assessment of included studies

Most included studies were observational, cross-sectional, or longitudinal cohort studies. Therefore, the evidence base was primarily affected by potential confounding, selection bias, measurement heterogeneity, and the possibility of reverse causality. Considerable variation was observed in the assessment of awareness, including patient-reported understanding, treatment-goal comprehension, terminal-status acknowledgment, and structured awareness instruments.

Prospective and longitudinal studies provided stronger evidence regarding changes in awareness over time; however, these designs could not completely determine whether awareness directly influenced subsequent outcomes or whether awareness was influenced by disease severity, psychological characteristics, coping mechanisms, or available support systems.

Survival and end-of-life care outcomes

Evidence regarding survival and end-of-life outcomes was generally more consistent than evidence related to psychological outcomes. In the Coping with Cancer cohort, peaceful awareness was associated with greater completion of advance care planning and improved caregiver-rated quality of death [7]. Similarly, end-of-life discussions were associated with reduced use of aggressive interventions near death and earlier hospice referral among patients with advanced cancer [8].

Patient and caregiver prognostic understanding was also associated with completion of do-not-resuscitate (DNR) decisions, suggesting that awareness may facilitate end-of-life decision-making [10]. Studies from Korea further examined associations between terminal illness awareness, survival, palliative care utilization, intensive care use, and quality of life [11, 23, 25]. Overall, awareness was not consistently associated with reduced survival.

Quality-of-life outcomes

Associations between awareness and quality of life were heterogeneous. Studies evaluating diagnostic awareness generally did not demonstrate consistent evidence that disclosure of cancer diagnosis results in deterioration of quality of life. For example, among patients with lung cancer in North India, diagnostic awareness was not independently associated with health-

related quality of life after adjustment for potential confounders [27]. Similarly, a disclosure intervention study reported no immediate decline in quality of life following disclosure and suggested improvement after psychological support [44].

Conversely, Montazeri et al. reported higher physical, social, and emotional quality-of-life scores among patients who were unaware of their diagnosis in an Iranian population, highlighting the potential influence of cultural context and communication practices [4].

Findings regarding prognostic awareness were also inconsistent. Some studies among patients with advanced cancer associated greater prognostic awareness with poorer quality of life or mood outcomes [12, 14, 16, 36], whereas others found no adverse effect or suggested potential benefits through improved communication and decision-making [5,6,11]. Recent studies indicate that emotional adaptation, acceptance, and coping may play a greater role in determining quality of life than cognitive awareness alone [17].

Psychological distress, anxiety, and depression

Psychological outcomes demonstrated the greatest variability across studies. Several investigations reported associations between prognostic awareness and increased anxiety, depressive symptoms, or poorer psychological well-being, particularly among patients with newly diagnosed incurable or terminal cancer [12-16].

However, these findings do not necessarily indicate that disclosure itself causes psychological harm. Awareness may be more common among patients with advanced disease, greater symptom burden, more frequent clinician communication, or increased exposure to end-of-life decisions. Moreover, coping strategies, acceptance, and emotional preparedness appeared to influence psychological responses to awareness [7, 13, 14, 17, 34].

Existential, spiritual, and acceptance-related outcomes

Several studies emphasized that awareness involves both cognitive understanding and emotional adaptation. Peaceful awareness, illness acceptance, spiritual well-being, and emotional preparedness were identified as important factors influencing whether awareness was associated with beneficial or adverse outcomes.

Ray et al. reported that patients who demonstrated both awareness and emotional peace experienced better psychological and end-of-life outcomes [7]. Tang et al. found that prognostic acceptance moderated the relationship between awareness, existential distress, and quality of life [13]. Similarly, Ozdemir et al. showed that illness acceptance influenced associations between awareness and anxiety, depression, and spiritual well-being [15]. Amonoo et al. further demonstrated that emotional coping with prognosis was more strongly associated with quality of life and distress than cognitive understanding alone [17].

Decision-making and communication outcomes

Greater awareness was frequently associated with improved participation in treatment decisions and care planning. Studies examining prognostic discussions and end-of-life communication reported associations with advance care planning, DNR completion, hospice referral, and reduced use of potentially non-beneficial interventions [8-10].

However, the communication of diagnostic and prognostic information varied substantially across cultural contexts. In some Asian settings, patients and families may prefer gradual or family-mediated disclosure approaches, reflecting differences in autonomy, family roles, and communication preferences [4-6, 45]. Therefore, disclosure outcomes should be interpreted within the broader context of patient preferences, cultural values, readiness, and psychosocial support.

Discussion

Principal findings

This systematic review demonstrates that complete awareness of cancer diagnosis and prognosis is neither inherently harmful nor universally beneficial. Diagnostic disclosure was generally not associated with sustained deterioration in patient outcomes when delivered through appropriate communication strategies and accompanied by adequate support. However, prognostic awareness showed more complex and context-dependent associations, with potential benefits for advance care planning, hospice utilization, DNR decision-making, communication, and preference-concordant care, while also being associated with psychological distress in some patient populations.

The central finding of this review is that the impact of awareness depends largely on how patients interpret and integrate information about their illness. Patients who understand their prognosis cognitively but lack emotional preparedness, acceptance, coping resources, spiritual well-being, or psychosocial support may experience greater distress. Conversely, awareness combined with acceptance and effective support may facilitate psychological adaptation and improve end-of-life experiences.

Interpretation of heterogeneous findings

Several factors may explain the inconsistent associations observed across studies. First, awareness is a multidimensional construct that has been measured using diverse definitions, including diagnostic awareness, disease-stage understanding, terminal-status recognition, treatment-goal comprehension, life-expectancy understanding, and emotional acceptance. These concepts are related but represent distinct aspects of illness understanding.

Second, disease stage appears to influence the consequences of awareness. The psychological and clinical implications of awareness may differ considerably between patients with newly diagnosed cancer and those with advanced, metastatic, or terminal disease. Third, cultural context strongly influences disclosure practices, patient preferences, family involvement, and interpretations of illness-related information. Finally, outcomes may depend less on the provision of information

itself and more on the quality of communication, timing of disclosure, patient readiness, and availability of emotional and supportive care.

Together, these findings support a multidimensional framework in which awareness includes cognitive, emotional, relational, cultural, and clinical components. Thus, awareness alone may not determine outcomes; rather, awareness integrated with supportive communication and psychological adaptation appears to be the clinically relevant factor.

Comparison with previous reviews

The findings of this review are consistent with previous systematic and conceptual reviews indicating that prognostic awareness is frequently reported among patients with advanced cancer but remains inconsistently defined and variably associated with outcomes [2, 18, 19, 46]. Previous studies have demonstrated that associations between prognostic awareness and health-related quality of life are influenced by population characteristics, measurement approaches, and clinical context [18]. Similarly, evidence suggests that the effects of prognostic awareness may differ according to cancer stage, with potentially different implications for patients receiving palliative versus earlier-stage care [19].

The present review extends previous evidence by integrating diagnostic awareness, prognostic awareness, psychological outcomes, decision-making, and end-of-life care outcomes. Importantly, it highlights the role of emotional adaptation, acceptance, and culturally sensitive communication as factors that may explain contradictory findings across studies.

Clinical implications

The findings do not support routine nondisclosure of cancer diagnosis or prognosis based solely on concerns that awareness may cause psychological harm. Instead, healthcare professionals should assess patients' preferences for information, readiness to receive prognostic details, emotional condition, cultural background, family involvement, and psychosocial needs.

Disclosure should be considered a gradual and ongoing communication process rather than a single event. Communication frameworks such as SPIKES may assist clinicians in structuring difficult conversations; however, information delivery should be integrated with psychological, spiritual, and palliative-care support when appropriate [3, 44]. The goal of disclosure should extend beyond providing information to helping patients incorporate illness understanding into treatment decisions, personal values, and coping processes.

Research implications

Future research should establish more standardized definitions and measurement approaches for diagnostic and prognostic awareness. Studies incorporating both cognitive and emotional dimensions of awareness are needed to better understand why some patients adapt positively while others experience distress.

Longitudinal studies are particularly important for distinguishing short-term emotional responses after disclosure from sustained psychological outcomes. Further research should evaluate culturally adapted disclosure interventions and investigate whether psychosocial and palliative-care support modifies the relationship between awareness and quality of life. Patient–caregiver dyadic studies are also warranted because family communication and shared understanding often influence decision-making processes.

Limitations

This review has several limitations. First, the literature search was limited to PubMed; therefore, relevant studies indexed exclusively in other databases, such as Embase, PsycINFO, CINAHL, or Scopus, may not have been identified. Second, substantial heterogeneity existed in awareness definitions, study populations, and outcome measurements, limiting direct comparison across studies. Third, most included studies used observational designs, restricting causal interpretation. Finally, the inclusion of English-language publications may have introduced language bias.

In conclusion, Complete awareness of cancer diagnosis and prognosis should not be systematically withheld from adult patients based on the assumption that disclosure is inherently harmful. Current evidence suggests that diagnostic awareness is generally neutral or manageable when communicated appropriately, whereas prognostic awareness has complex and context-dependent associations with patient outcomes.

Awareness may facilitate advance care planning, hospice utilization, communication, and care aligned with patient preferences; however, it may also be accompanied by anxiety, depression, existential distress, or reduced quality of life in some circumstances. Therefore, the central clinical question is not simply whether patients should be informed, but how, when, and with what support diagnostic and prognostic information should be communicated. Individualized, culturally responsive, and psychologically supported disclosure represents the most appropriate approach based on current evidence.

Data availability

This review was based on previously published studies. The extracted data and supplementary materials can be provided upon reasonable request.

References

1. Hagerty RG, Butow PN, Ellis PM, Dimitry S, Tattersall MHN. Communicating prognosis in cancer care: a systematic review of the literature. Annals of Oncology: Official Journal of the European Society for Medical Oncology. 2005 07;16(7):1005-1053. https://doi.org/10.1093/annonc/mdi211
2. Applebaum AJ, Kolva EA, Kulikowski JR, Jacobs JD, DeRosa A, Lichtenthal WG, Olden ME, Rosenfeld B, Breitbart W. Conceptualizing prognostic awareness in advanced cancer: a systematic review. Journal of Health Psychology. 2014 09;19(9):1103-1119. https://doi.org/10.1177/1359105313484782
3. Butow PN, Clayton JM, Epstein RM. Prognostic Awareness in Adult Oncology and Palliative Care. Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology. 2020 03 20;38(9):877-884. https://doi.org/10.1200/JCO.18.02112
4. Montazeri A, Tavoli A, Mohagheghi MA, Roshan R, Tavoli Z. Disclosure of cancer diagnosis and quality of life in cancer patients: should it be the same everywhere?. BMC cancer. 2009 01 29;9:39. https://doi.org/10.1186/1471-2407-9-39
5. Manalo MFC, Yang GM, Reandelar M, Ozdemir Van Dyk S, Malhotra C, Finkelstein EA. Cancer patients' awareness of extent of disease: anxiety, depression, quality of life. BMJ supportive & palliative care. 2025 Oct 27;15(6):760-767. https://doi.org/10.1136/spcare-2022-004112
6. Putranto R, Shatri H, Irawan C, Gondhowiardjo S, Finkelstein E, Malhotra C, Ozdemir S, et al. The association of prognostic awareness with quality of life, spiritual well-being, psychological distress, and pain severity in patients with advanced cancer: Results from the APPROACH Study in Indonesia. Palliative & Supportive Care. 2024 03 07;:1-7. https://doi.org/10.1017/S1478951524000269
7. Ray A, Block SD, Friedlander RJ, Zhang B, Maciejewski PK, Prigerson HG. Peaceful Awareness in Patients with Advanced Cancer. Journal of Palliative Medicine. 2006 Dec;9(6):1359-1368. https://doi.org/10.1089/jpm.2006.9.1359
8. Wright AA. Associations Between End-of-Life Discussions, Patient Mental Health, Medical Care Near Death, and Caregiver Bereavement Adjustment. JAMA. 2008 Oct 08;300(14):1665. https://doi.org/10.1001/jama.300.14.1665
9. Mack JW, Cronin A, Keating NL, Taback N, Huskamp HA, Malin JL, Earle CC, Weeks JC. Associations between end-of-life discussion characteristics and care received near death: a prospective cohort study. Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology. 2012 Dec 10;30(35):4387-4395. https://doi.org/10.1200/JCO.2012.43.6055
10. Shen MJ, Trevino KM, Prigerson HG. The interactive effect of advanced cancer patient and caregiver prognostic understanding on patients' completion of Do Not Resuscitate orders. Psycho-Oncology. 2018 07;27(7):1765-1771. https://doi.org/10.1002/pon.4723
11. Lee H, Ko H, Kim A, Kim S, Moon H, Choi H. Effect of Prognosis Awareness on the Survival and Quality of Life of Terminally Ill Cancer Patients: A Prospective Cohort Study. Korean Journal of Family Medicine. 2020 03;41(2):91-97. https://doi.org/10.4082/kjfm.18.0113
12. El-Jawahri A, Traeger L, Park ER, Greer JA, Pirl WF, Lennes IT, Jackson VA, Gallagher ER, Temel JS. Associations among prognostic understanding, quality of life, and mood in patients with advanced cancer. Cancer. 2014 01 15;120(2):278-285. https://doi.org/10.1002/cncr.28369
13. Tang ST, Chang W, Chen J, Chou W, Hsieh C, Chen CH. Associations of prognostic awareness/acceptance with psychological distress, existential suffering, and quality of life in terminally ill cancer patients' last year of life. Psycho-Oncology. 2016 04;25(4):455-462. https://doi.org/10.1002/pon.3943
14. Nipp RD, Greer JA, El-Jawahri A, Moran SM, Traeger L, Jacobs JM, Jacobsen JC, et al. Coping and Prognostic Awareness in Patients With Advanced Cancer. Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology. 2017 08 01;35(22):2551-2557. https://doi.org/10.1200/JCO.2016.71.3404
15. Ozdemir S, Ng S, Wong WHM, Teo I, Malhotra C, Mathews JJ, Joad ASK, et al. Advanced Cancer Patients' Prognostic Awareness and Its Association With Anxiety, Depression and Spiritual Well-Being: A Multi-Country Study in Asia. Clinical Oncology (Royal College of Radiologists (Great Britain)). 2022 06;34(6):368-375. https://doi.org/10.1016/j.clon.2021.11.041
16. Chen CH, Wen F, Chang W, Hsieh C, Chou W, Chen J, Tang ST. Associations of prognostic-awareness-transition patterns with emotional distress and quality of life during terminally ill cancer patients' last 6 months of life. Psycho-Oncology. 2023 05;32(5):741-750. https://doi.org/10.1002/pon.6119
17. Amonoo HL, Centracchio J, Greydanus C, Lavoie MW, Keane EP, Greer JA, Lindenberger EC, et al. Domains of prognostic awareness, quality of life, and psychological distress in patients with advanced cancer. The Oncologist. 2025 Nov 11;30(11):oyaf344. https://doi.org/10.1093/oncolo/oyaf344
18. Ng S, Ozdemir S. The associations between prognostic awareness and health-related quality of life among patients with advanced cancer: A systematic review. Palliative Medicine. 2023 06;37(6):808-823. https://doi.org/10.1177/02692163231165325
19. Luciani F, Veneziani G, Giraldi E, Campedelli V, Galli F, Lai C. To be aware or not to be aware of the prognosis in the terminal stage of cancer? A systematic review of the associations between prognostic awareness with anxiety, depression, and quality of life according to cancer stage. Clinical Psychology Review. 2025 03;116:102544. https://doi.org/10.1016/j.cpr.2025.102544
20. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, Shamseer L, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021 03 29;:n71. https://doi.org/10.1136/bmj.n71
21. Montazeri A, Hole DJ, Milroy R, McEwen J, Gillis CR. Does knowledge of cancer diagnosis affect quality of life? A methodological challenge. BMC Cancer. 2004 05 19;4(1):21. https://doi.org/10.1186/1471-2407-4-21
22. Tang ST, Liu T, Tsai C, Wang C, Chang G, Liu L. Patient awareness of prognosis, patient-family caregiver congruence on the preferred place of death, and caregiving burden of families contribute to the quality of life for terminally ill cancer patients in Taiwan. Psycho-Oncology. 2008 Dec;17(12):1202-1209. https://doi.org/10.1002/pon.1343
23. Yun YH, Lee MK, Kim SY, Lee WJ, Jung KH, Do YR, Kim S, et al. Impact of awareness of terminal illness and use of palliative care or intensive care unit on the survival of terminally ill patients with cancer: prospective cohort study. Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology. 2011 06 20;29(18):2474-2480. https://doi.org/10.1200/JCO.2010.30.1184
24. Lee MK, Baek SK, Kim S, Heo DS, Yun YH, Park SR, Kim JS. Awareness of incurable cancer status and health-related quality of life among advanced cancer patients: a prospective cohort study. Palliative Medicine. 2013 02;27(2):144-154. https://doi.org/10.1177/0269216311429042

25. Kim S, Kim J, Kim S, Shin I, Bae K, Shim H, Hwang J, et al. Does awareness of terminal status influence survival and quality of life in terminally ill cancer patients?. Psycho-Oncology. 2013 Oct;22(10):2206-2213. https://doi.org/10.1002/pon.3275
26. Fisher K, Seow H, Cohen J, Declercq A, Freeman S, Guthrie DM. Patient characteristics associated with prognostic awareness: a study of a Canadian palliative care population using the InterRAI palliative care instrument. Journal of Pain and Symptom Management. 2015 04;49(4):716-725. https://doi.org/10.1016/j.jpainsymman.2014.08.008
27. Aggarwal AN, Singh N, Gupta D, Behera D. Does awareness of diagnosis influence health related quality of life in north Indian patients with lung cancer ?. The Indian Journal of Medical Research. 2016 05;143(Supplement):S38-S44. https://doi.org/10.4103/0971-5916.191757
28. Shin JA, El-Jawahri A, Parkes A, Schleicher SM, Knight HP, Temel JS. Quality of Life, Mood, and Prognostic Understanding in Patients with Metastatic Breast Cancer. Journal of Palliative Medicine. 2016 08;19(8):863-869. https://doi.org/10.1089/jpm.2016.0027
29. Lai C, Luciani M, Galli F, Morelli E, Del Prete F, Ginobbi P, Penco I, Aceto P, Lombardo L. Spirituality and Awareness of Diagnoses in Terminally Ill Patients With Cancer. The American Journal of Hospice & Palliative Care. 2017 07;34(6):505-509. https://doi.org/10.1177/1049909116630985
30. Diamond EL, Prigerson HG, Correa DC, Reiner A, Panageas K, Kryza-Lacombe M, Buthorn J, et al. Prognostic awareness, prognostic communication, and cognitive function in patients with malignant glioma. Neuro-Oncology. 2017 Oct 19;19(11):1532-1541. https://doi.org/10.1093/neuonc/nox117
31. Hsiu Chen C, Wen F, Hou M, Hsieh C, Chou W, Chen J, Chang W, Tang ST. Transitions in Prognostic Awareness Among Terminally Ill Cancer Patients in Their Last 6 Months of Life Examined by Multi-State Markov Modeling. The Oncologist. 2017 09;22(9):1135-1142. https://doi.org/10.1634/theoncologist.2017-0068
32. Sato T, Soejima K, Fujisawa D, Takeuchi M, Arai D, Nakachi I, Naoki K, et al. Prognostic Understanding at Diagnosis and Associated Factors in Patients with Advanced Lung Cancer and Their Caregivers. The Oncologist. 2018 Oct;23(10):1218-1229. https://doi.org/10.1634/theoncologist.2017-0329
33. Janssens A, Derijcke S, Galdermans D, Daenen M, Surmont V, De Droogh E, Lefebure A, et al. Prognostic Understanding and Quality of Life in Patients With Advanced Lung Cancer: A Multicenter Study. Clinical Lung Cancer. 2019 05;20(3):e369-e375. https://doi.org/10.1016/j.cllc.2018.11.011
34. Tang ST, Chou W, Chang W, Chen J, Hsieh C, Wen F, Chung S. Courses of Change in Good Emotional Preparedness for Death and Accurate Prognostic Awareness and Their Associations With Psychological Distress and Quality of Life in Terminally Ill Cancer Patients' Last Year of Life. Journal of Pain and Symptom Management. 2019 Oct;58(4):623-631.e1. https://doi.org/10.1016/j.jpainsymman.2019.06.022
35. Chen J, Wen F, Chou W, Hsieh C, Chang W, Tang ST. Terminally Ill Cancer Patients' Distinct Symptom-Functional Patterns/States Are Differentially Associated with Their Accurate Prognostic Awareness in the Last Six Months of Life. Journal of Palliative Medicine. 2019 07;22(7):782-789. https://doi.org/10.1089/jpm.2018.0538
36. Kang E, Kang JH, Koh S, Song E, Shim H, Keam B, Maeng C, et al. The Impacts of Prognostic Awareness on Mood and Quality of Life Among Patients With Advanced Cancer. The American Journal of Hospice & Palliative Care. 2020 Nov;37(11):904-912. https://doi.org/10.1177/1049909120905789
37. George LS, Maciejewski PK, Epstein AS, Shen M, Prigerson HG. Advanced Cancer Patients' Changes in Accurate Prognostic Understanding and Their Psychological Well-Being. Journal of Pain and Symptom Management. 2020 05;59(5):983-989. https://doi.org/10.1016/j.jpainsymman.2019.12.366
38. Tang ST, Chou W, Hsieh C, Chang W, Chen J, Wen F. Terminally Ill Cancer Patients' Emotional Preparedness for Death Is Distinct From Their Accurate Prognostic Awareness. Journal of Pain and Symptom Management. 2020 Oct;60(4):774-781.e1. https://doi.org/10.1016/j.jpainsymman.2020.04.021
39. Arai D, Sato T, Nakachi I, Fujisawa D, Takeuchi M, Sato Y, Kawada I, et al. Longitudinal Assessment of Prognostic Understanding in Patients with Advanced Lung Cancer and Its Association with Their Psychological Distress. The Oncologist. 2021 Dec;26(12):e2265-e2273. https://doi.org/10.1002/onco.13973
40. Satija A, Bhatnagar S, Ozdemir S, Finkelstein E, Maholtra C, Teo I, Yang GM. Patients' Awareness of Advanced Disease Status, Psychological Distress and Quality of Life Among Patients With Advanced Cancer: Results From the APPROACH Study, India. The American Journal of Hospice & Palliative Care. 2022 07;39(7):772-778. https://doi.org/10.1177/10499091211042837
41. Vlckova K, Polakova K, Tuckova A, Houska A, Loucka M. Association between prognostic awareness and quality of life in patients with advanced cancer. Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation. 2022 08;31(8):2367-2374. https://doi.org/10.1007/s11136-022-03097-z
42. Ozdemir S, Chaudhry I, Ng S, Teo I, Malhotra C, Finkelstein EA. Prognostic awareness and its association with health outcomes in the last year of life. Cancer Medicine. 2023 02;12(4):4801-4808. https://doi.org/10.1002/cam4.5286
43. Krueger E, Mosher CE, Lewson A, Hickman SE, Wu W, Prigerson HG. Cancer Prognostic Awareness: Relations to Patient and Caregiver Quality of Life and Care Preferences. Journal of Pain and Symptom Management. 2025 09;70(3):313-323.e3. https://doi.org/10.1016/j.jpainsymman.2025.06.002
44. Zheng Y, Lei F, Liu B. Cancer Diagnosis Disclosure and Quality of Life in Elderly Cancer Patients. Healthcare. 2019 Dec 14;7(4):163. https://doi.org/10.3390/healthcare7040163
45. Ozdemir S, Malhotra C, Teo I, Tan SNG, Wong WHM, Joad ASK, Hapuarachchi T, et al. Patient-Reported Roles in Decision-Making Among Asian Patients With Advanced Cancer: A Multicountry Study. MDM policy & practice. 2021;6(2):23814683211061398. https://doi.org/10.1177/23814683211061398
46. Vlckova K, Tuckova A, Polakova K, Loucka M. Factors associated with prognostic awareness in patients with cancer: A systematic review. Psycho-Oncology. 2020 06;29(6):990-1003. https://doi.org/10.1002/pon.5385

This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.