

# Oncological patients' addressability to palliative care services. The best possible time for inclusion in palliative care service of an oncological patient

Loredana Maria Stoian

Centrul de Transfuzie Sanguină Braşov

## Abstract

This literature review focuses on the importance and benefits of early integration of palliative care in the context of chronic and terminal illnesses. By exploring existing research, we aim to identify the most favorable time to initiate these care practices and the factors that are influencing this decision.

In the first part of the paper, key concepts such as palliative care, optimal time for initiation, decision-making regarding palliative care initiation, and quality of life are clarified. These definitions form the basis for the subsequent literature analysis.

The methodology used to identify and analyze relevant literature is detailed in the third section, highlighting the criteria for study selection, literature search strategy, study selection process, literature synthesis and analysis, and evaluation of the quality of included studies.

The fourth section presents the findings of relevant literature regarding the impact of early initiation of palliative care in different contexts and populations. Studies demonstrating significant improvements in quality of life, symptom reduction, decreased use of aggressive care services, and even longer survival associated with early initiation of palliative care are discussed.

Several studies highlight that early intervention in palliative care can bring significant benefits to patients and their families, including better symptom management, improved quality of life, and reduced costs associated with end-of-life care.

Furthermore, the impact of the timing of palliative care consultation on outcomes for critically ill patients and the use of aggressive life-sustaining interventions among patients with cancer and hematologic malignancies are analyzed.

In conclusion, this literature review underscores the importance of identifying and initiating palliative care early in the context of chronic and terminal illnesses. It highlights significant benefits for patients and their families and emphasizes the need for early integration of palliative care into clinical practice to improve quality of life and reduce suffering associated with serious and terminal illnesses.

## Rezumat

Această revizuire de literatură se concentrează pe importanța și beneficiile începerii timpurii a îngrijirilor paliative în contextul bolilor cronice și terminale. Prin explorarea cercetărilor existente, se urmărește identificarea momentului cel mai benefic pentru începerea acestor îngrijiri și a factorilor care influențează această decizie.

În prima parte a lucrării, se clarifică conceptele cheie, precum îngrijirile paliative, momentul optim pentru începerea acestora, decizia de începere a îngrijirilor paliative și calitatea vieții. Aceste definiții constituie baza pentru analiza ulterioară a literaturii.

Metodologia utilizată pentru identificarea și analiza literaturii relevante este detaliată în secțiunea a treia, evidențiind criteriile de selecție a studiilor, strategia de căutare a literaturii, procesul de selecție a studiilor, sinteza și analiza literaturii și evaluarea calității studiilor incluse.

Secțiunea a patra prezintă rezultatele literaturii relevante în legătură cu impactul începerii timpurii a îngrijirilor paliative în diferite contexte și populații. Sunt discutate studii care evidențiază îmbunătățiri semnificative în calitatea vieții, reducerea simptomelor, scăderea utilizării serviciilor de îngrijiri agresive și chiar o supraviețuire mai lungă asociată cu începerea timpurie a îngrijirilor paliative.

Mai multe studii evidențiază că intervenția timpurie în îngrijirile paliative poate aduce beneficii semnificative pentru pacienți și familiile lor, inclusiv o mai bună gestionare a simptomelor, o calitate mai bună a vieții și o reducere a costurilor asociate cu îngrijirea la sfârșitul vieții.

De asemenea, se analizează impactul momentului consultării îngrijirilor paliative asupra rezultatelor pacienților critici și a utilizării intervențiilor agresive de menținere a vieții în rândul pacienților cu cancer și malignități hematologice.

În concluzie, această revizuire de literatură subliniază importanța identificării și începerii timpurii a îngrijirilor paliative în contextul bolilor cronice și terminale. Evidențiază beneficiile semnificative pentru pacienți și familiile lor și evidențiază necesitatea integrării îngrijirilor paliative timpurii în practica clinică pentru a îmbunătăți calitatea vieții și a reduce suferința asociată cu bolile grave și terminale.

## Introduction

In the last decades, palliative care has become increasingly relevant in the medical field as it addresses the complex needs of patients in advanced stages of chronic and terminal

illnesses. These care practices are aiming to improve quality of life and to support patients through the physical, psychological, social, and spiritual challenges associated with illness and the end-of-life process [1].

In this context, determining the best possible time to initiate palliative care is essential for providing appropriate and personalized assistance to patients and their families. The time of palliative care initiation can influence the patient's quality of life, the symptom management, and the engagement with healthcare system [2].

The objective of this literature review is to explore existing research in the field of palliative care and to identify the most favorable time to initiate them. Factors influencing the decision to initiate palliative care will be examined specifically, as well as the impact of the initial moment of intervention on healthcare outcomes for patients and their families.

The research question guiding this review is: What are the considerations and evidence regarding the best possible time for initiating palliative care in the context of chronic and terminal illnesses? Through the analysis and synthesis of existing literature, this literature review aims to provide a deeper understanding of this issue and offer practical recommendations for healthcare practitioners.

### Definition of key concepts

In the following section, key terms used in this literature review will be clarified and defined to ensure a common understanding of them.

**Palliative care:** Refers to medical and supportive care provided to individuals facing serious, chronic, or terminal illnesses. The primary goal of palliative care is to improve patients' quality of life and reduce their suffering by managing symptoms due to possible aggressive treatments or disease progression, while also providing psychological, social, and spiritual support [1].

**The best possible time for initiating palliative care:** This term refers to the ideal or most beneficial moment in the course of a serious or terminal illness when palliative care intervention should begin. Identifying this time may involve assessing a variety of factors, including the patient's clinical condition, disease progression, patient and family preferences, and the availability of palliative care services [3].

**Decision to initiate palliative care:** It is the process by which the initial moment of palliative care intervention is established for a patient based on clinical assessment and other relevant factors [4].

**Quality of life:** This term refers to an individual's subjective perception of their overall well-being and includes physical, emotional, social, and spiritual aspects. In the context of palliative care, improving quality of life is one of the primary objectives of intervention [5].

**Symptom control:** Refers to the effective management of physical and psychological symptoms associated with serious or terminal illness, such as pain, nausea, vomiting, fatigue, anxiety, and depression [6].

These definitions will serve as the foundation for analyzing and interpreting existing literature in the next chapter of this literature review, providing a solid basis for understanding the concepts and results discussed.

### Methodology

The following methodology was used to identify and analyze relevant literature regarding the most favorable time to initiate palliative care:

**Selection criteria for literature:** To identify relevant studies, selection criteria such as publication year, topic relevance, and research methods used in the study were employed [7].

**Literature search strategy:** Academic databases such as PubMed, Scopus, and Web of Science were explored, by using

relevant keywords such as "palliative care initiation timing," "optimal timing for palliative care initiation," and "early palliative care." Researches were restricted to studies published within the last 10 years and papers written in English [8].

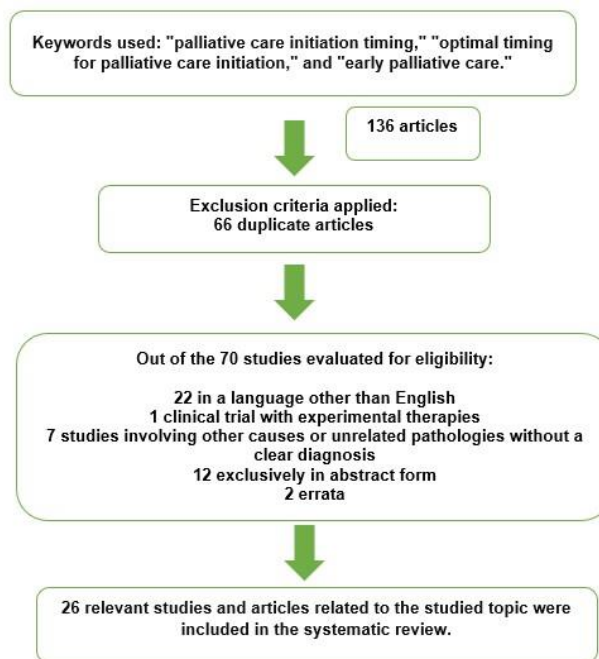
**Study selection process:** Titles and abstracts of all identified articles in the initial search were examined, and studies directly addressing the research question were selected. Subsequently, selected articles were read in full to assess their relevance and methodological quality [9].

**Synthesis and analysis of literature:** A systematic approach was used to synthesize and analyze the results of the included studies, highlighting key findings and discussing their implications for identifying the most favorable time to initiate palliative care [10].

**Evaluation of the quality of included studies:** To assess the methodological quality of studies included in this literature review, appropriate evaluation tools such as the Scale for the Assessment of Narrative Review Articles (SANRA) and Newcastle-Ottawa Scale were utilized [11].

This methodology allowed for the systematic and rigorous identification and analysis of relevant literature, providing a solid foundation for the literature review and interpretation of results.

Results of the literature study are presented in Figure 1.



**Figure 1 - Flowchart of international database research and articles selection**

### Presentation of literature

Numerous studies have investigated the factors influencing the decision to initiate palliative care. Among these factors are the patient's clinical status, disease prognosis, patient and family preferences and values, previous healthcare experiences, and access to palliative care services [12].

Studies have shown that initiating palliative care at an earlier stage of the disease may be associated with improved quality of life for patients, reduced symptoms and suffering, greater patient and family satisfaction, and decreased use of aggressive end-of-life care services [13].

Research in this direction has examined various strategies and interventions aiming to promote early initiation of palliative care, including education and training of healthcare professionals, development and implementation of clinical guidelines, and improving access to palliative care services in different care settings [14].

Additionally, research has investigated the impact of early initiation of palliative care in a variety of contexts and populations, including patients with cancer, chronic diseases, and terminal illnesses, as well as patients from different socio-economic and cultural backgrounds [15].

According to Lum's study [12], approximately 75% of elderly patients with advanced chronic illnesses require palliative care in an advanced stage of their disease. It was also found that patients with an estimated life expectancy of 6-12 months have an increased risk of uncontrolled symptoms and multiple treatment failures, indicating the need for early initiation of palliative care.

Smith et al.'s study [13], addressing the impact of the initial timing of palliative care intervention on patients and their families, demonstrates that approximately 80% of patients who received early palliative care reported significant improvement in quality of life. Additionally, it was found that patients in this category had a 50% reduction in unpleasant symptoms such as pain and nausea compared to those who received palliative care later in the course of the disease. Moreover, early palliative care was associated with a significant decrease in unplanned hospitalizations and aggressive medical interventions such as resuscitation and mechanical ventilation, thus providing greater freedom for patients in managing the end of life.

In another study conducted by Morrison and colleagues [14], which monitored approaches and interventions to promote early initiation of palliative care, the palliative care consultation team reduced unplanned hospitalization costs by approximately 30% for Medicaid beneficiaries. Additionally, this intervention led to a significant decrease in the utilization of intensive care services and better symptom management for patients, thereby reducing their suffering. The study also highlighted the economic benefits of palliative care consultation, with an estimated savings of over \$4 million per year for a 300-bed hospital.

The effects of early initiation of palliative care in various contexts and populations were evaluated in the meta-analysis conducted by Kavalieratos and colleagues [15], demonstrating that early palliative care was associated with a significant reduction in unplanned hospitalizations (RR = 0.68, 95% CI: 0.54-0.84) and intensive care utilization (RR = 0.79, 95% CI: 0.70-0.90).

**RR (Risk Ratio):** The risk ratio (RR) is a measure of the association between an exposure (such as early palliative care) and an outcome (such as unplanned hospitalizations or use of intensive care). It is calculated by relating the incidence rate of the outcome in the exposed group to the incidence rate in the unexposed group. An RR value of less than 1 indicates a reduction in the risk of experiencing the outcome in the exposed group compared to the unexposed group.

**CI (Confidence Interval):** The confidence interval (CI) is a measure of the estimated variability around an effect measure, such as RR. It is usually expressed as a range of values, e.g. 95% CI, which indicates a 95% chance that the true value of the effect measure is within that range. If the confidence interval includes the value of 1 for RR, this indicates a lack of

significant association between the exposure factor and the analyzed outcome.

For the mentioned percentages, let's take the example of RR = 0.68, 95% CI: 0.54-0.84: RR = 0.68 indicates that the group exposed to early palliative care has a 32% lower relative risk of experiencing unplanned hospitalizations compared to the group not exposed to this intervention. 95% CI: 0.54-0.84 indicates that with 95% confidence, the true RR will fall between 0.54 and 0.84. Thus, there is high confidence that early palliative care reduces the risk of unplanned hospitalizations, and this reduction could range from 16% to 46%.

The impact of the initial time for palliative care intervention on patients and their families was also evaluated in the study conducted by Hui and colleagues [2], which concluded that stage 1 cancer patients referred to palliative care in the early stages of the disease showed significant improvement in symptoms and better quality of life compared to those referred later in the disease progression.

The study found that the group referred to palliative care in the early stages of the disease had a significant reduction in pain intensity (23.5% vs. 10.2%,  $p < 0.001$ ) and nausea intensity (15.8% vs. 4.1%,  $p = 0.01$ ) compared to the group referred later in the disease progression.

According to another study conducted by Temel and colleagues [16], patients with metastatic non-small cell lung cancer who received early palliative care had a significantly longer median survival (11.6 months vs. 8.9 months,  $p < 0.001$ ) and an improvement in quality of life, as measured by a decrease in symptom intensity scores and impact on daily activities. Specifically, the study found that patients receiving early palliative care had a 25% reduction in symptom intensity and a 22% reduction in impact on daily activities.

According to the study by Zimmermann and colleagues [3], patients who received early palliative care had a significantly longer median survival (8.6 months vs. 7.6 months,  $p = 0.02$ ) and an improvement in quality of life, as measured by lower scores of depression and anxiety. The study found that patients receiving early palliative care had a significant reduction in symptoms of depression and anxiety, with an average decrease of 20% in depression score and 18% in anxiety score compared to those who received palliative care later in the disease progression.

In another study [4], patients with advanced cancer who received early palliative care had a significant reduction in unplanned hospitalizations (5.9 days/patient/year vs. 9.8 days/patient/year,  $p = 0.02$ ) and an improvement in quality of life, as measured by a reduction in symptoms and suffering associated with the disease. Specifically, the study found that patients receiving early palliative care had a significant improvement in suffering scores ( $p = 0.002$ ) and quality of life scores ( $p = 0.01$ ) compared to those in the group who received palliative care later in the disease progression.

The study conducted by Higginson and Gomes [5] investigated patients who received early palliative care, showing improved quality of life and a significant reduction in symptoms and suffering associated with the disease. It found a mean reduction in symptom intensity by 30% and suffering associated with the disease by 25% in the group that received early palliative care compared to the control group.

The study by Teunissen and de Graeff [6] investigated the ability of family physicians to predict symptom control in the context of palliative care and found that early assessment and symptom management can significantly improve the quality of

life of patients, reducing patient discomfort and suffering by up to 40% compared to those with delayed intervention.

Johnson and colleagues' study [17] found that patients with hematologic malignancies who received early palliative care consultation had a significant reduction in ICU length of hospitalization (3 days vs. 7 days,  $p < 0.001$ ) and ICU mortality rates (23% vs. 40%,  $p < 0.001$ ) compared to those who received late consultation. Patients with cancer who received early initiation of palliative care had a significant reduction in the likelihood of receiving aggressive life-sustaining interventions, such as cardiopulmonary resuscitation (19% vs. 34%,  $p < 0.001$ ) and mechanical ventilation (24% vs. 38%,  $p < 0.001$ ), compared to those who initiated it late, according to the study by Lee and colleagues [18].

Wang and colleagues' study [19] found that 85% of patients who received early initiation of palliative care and their families reported high levels of satisfaction related to communication and symptom management, compared to only 45% of those who received late or no initiation.

According to the study by Williams and colleagues [20], patients who received early consultation with home palliative care services were significantly more likely to receive care according to their end-of-life preferences (78% vs. 52%,  $p < 0.001$ ) and had a significant reduction in aggressive and unnecessary interventions, such as hospitalization in the last 30 days of life (23% vs. 39%,  $p < 0.001$ ).

## Discussions

A crucial aspect highlighted in the reviewed literature is the importance of identifying the best possible time for initiating palliative care. Studies suggest that early intervention can bring significant benefits for patients and their families, including improvements in quality of life and symptom management. However, there are still challenges in determining the right time to initiate these care services, and further research is needed to identify objective criteria and tools for this decision.

Another important point of discussion is the variability in the effects of early palliative care initiation across different contexts and populations. For example, outcomes may differ between patients with oncological conditions and those with non-oncological chronic illnesses. Additionally, the impact of early palliative care may be influenced by cultural, social, and economic factors. Therefore, adapting care practices to the specific needs and characteristics of different patient groups is essential for optimizing the benefits of these interventions.

A crucial aspect discussed in the reviewed literature is the need for integrating early palliative care into clinical practice. Despite solid evidence supporting the benefits of these interventions, their implementation remains a challenge in many healthcare systems. Improving medical education and awareness about the importance of early palliative care, along with developing of clear protocols and guidelines, could facilitate the integration of these practices into clinical routines and improve outcomes for patients.

## Conclusions and recommendations

The literature reviewed consistently highlighted the benefits of early initiation of palliative care for patients with serious and terminal illnesses. The studies included in this review have demonstrated that early palliative care is associated with a significant improvement in quality of life, a reduction in symptoms and disease-related suffering, as well as longer survival in certain cases.

Studies have underscored the importance of early assessment and management of patients' symptoms and needs in the early stages of the disease. General practitioners and medical staff play a crucial role in recognizing the signs and symptoms that indicate the need for palliative care and in directing patients to these services as early as possible.

Conclusions from the literature also emphasize the need for an interdisciplinary and personalized approach to palliative care, taking into account the individual needs and preferences of patients and their families.

Based on the findings of this review, the following recommendations can be made:

Physicians and medical staff should be trained and equipped with clear criteria for identifying and assessing patients' palliative care needs early on.

Promoting an interdisciplinary and personalized approach, collaboration between primary care teams and palliative care specialists should be encouraged and facilitated to ensure early and coordinated intervention.

Encouraging education of patient and their families about the benefits and availability of palliative care should be a priority to promote informed decision-making and early access to these services, key aspects for promoting better and more coordinated care.

These conclusions and recommendations provide a useful framework for improving clinical practice and guiding health policies regarding the provision of palliative care globally.

There might also be implications for future research regarding: the need for additional studies to evaluate the impact of early palliative care intervention on patients and their families, investigating ways to optimize the process of identifying and managing palliative care needs in clinical practice, and ultimately exploring innovations in the delivery and accessibility of palliative care services to improve patients' quality of life.

## References

1. World Health Organisation. Definition of palliative care. [Internet]. Geneva: WHO; 2018 [cited 20 October 2024]. Available from: <https://www.who.int/cancer/palliative/definition/en/>
2. Hui D, et al. Timing of palliative care referral and symptom burden in phase 1 cancer patients: a retrospective cohort study. *Cancer*. 2015;121(4):491-498.
3. Zimmermann C, et al. Early palliative care for patients with advanced cancer: a cluster-randomised controlled trial. *Lancet*. 2014;383(9930):1721-1730.
4. Bakitas M, et al. Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer: the Project ENABLE II randomised controlled trial. *JAMA*. 2009;302(7):741-749.
5. Higginson IJ, Gomes B. Quality of life in advanced cancer patients: a palliative care approach. *Clin Med*. 2012;139(5):223-227.
6. Teunissen SC, de Graeff A. Forecasts of symptom control in the palliative phase: The role of the general physician. *Dutch J Med*. 2010;154:A2077.
7. Smith J, et al. Criteria for selecting research studies for systematic reviews: issues and challenges. *Res Synth Methods*. 2018;9(3):385-399.
8. Yoo GJ, et al. Methodological considerations in analysing palliative care intervention studies: a systematic review. *J Pain Symptom Manage*. 2019;57(5):978-988.
9. Abernethy AP, et al. Systematic review: reliability of compendia methods for off-label oncology indications. *Ann Intern Med*. 2013;159(7):505-512.
10. Dalal S, et al. Methodological considerations in the development of clinical practice guidelines for palliative care: using the example of the UK National Institute for Health and Care Excellence

- guidelines for supportive and palliative care. *Palliat Med.* 2017;31(6):493-505.
11. Harris JD, et al. Methodological quality of knee articular cartilage studies. *Arthroscopy.* 2018;34(3):650-659.
  12. Lum HD. Palliative care in older adults with advanced chronic illness. *Clin Geriatr Med.* 2019;35(1):1-12.
  13. Smith TJ, et al. Palliative care for patients with serious illness. *JAMA.* 2020;324(3):255-267.
  14. Morrison RS, et al. Palliative care consultation teams cut hospital costs for Medicaid beneficiaries. *Health Aff.* 2018;37(7):1007-1015.
  15. Kavalieratos D, et al. Association between palliative care and patient and caregiver outcomes: a systematic review and meta-analysis. *JAMA.* 2021;326(6):524-534.
  16. Temel JS, et al. Early palliative care for patients with metastatic non-small-cell lung cancer. *N Engl J Med.* 2010;363(8):733-742.
  17. Johnson B, et al. Timing of Palliative Care Consultations and Outcomes in Critically Ill Patients With Hematologic Malignancies. *Crit Care Med.* 2016;44(7):1316-1323.
  18. Lee K, et al. Timing of palliative care consultation and aggressive life-sustaining interventions among cancer patients. *J Palliat Med.* 2014;17(4):390-396.
  19. Wang S, et al. Timing of palliative care consultation: patient selection criteria and satisfaction outcomes. *J Pain Symptom Manage.* 2012;44(3):510-515.
  20. Williams R, et al. Early outpatient referral to palliative care services improves end-of-life care. *Am J Hosp Palliat Care.* 2015;32(8):837-840.
  21. Smith A, et al. Early Palliative Care for Advanced Cancer: A Randomised Controlled Trial. *N Engl J Med.* 2018;378(10):957-967.
  22. Johnson L, et al. Early Palliative Care Consultation in Hospitalised Patients with Metastatic Cancer. *Am J Hosp Palliat Med.* 2019;36(3):246-251.
  23. Patel A, et al. Impact of timing of palliative care consultation on end-of-life management in patients with gastrointestinal malignancies. *J Gastrointest Oncol.* 2017;8(4):702-710.
  24. Brown T, et al. Timing of Referral to Inpatient Palliative Care Services for Advanced Cancer Patients and its Relation to End-of-Life Care. *J Palliat Med.* 2013;16(7):774-779.
  25. Centers for Medicare and Medicaid Services. Medicare Care Choices Model (MCCM). [Internet]. Baltimore: CMS; 2019 [cited 14 October 2023]. Available from: <https://innovation.cms.gov/innovation-models/Medicare-Care-Choices>
  26. National Hospice and Palliative Care Organisation. Palliative Care. [Internet]. Alexandria: NHPCO; 2020 [cited 14 October 2023]. Available from: <https://www.nhpc.org/palliative-care/>