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Review

A Narrative Review of Early Palliative Care in Advanced Malignancy: Evidence, Challenges and Paths Ahead

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Abstract

Early palliative care (EPC) has been shown to improve the quality of life of patients with advanced malignancies, although its role within the context of newer cancer therapeutics requires further research. Despite endorsement by national and international guidelines, EPC remains an aspirational ideal rather than a routine practice. Implementation is hindered by limited resources, clinician hesitancy to refer and patient- and family-related factors. To translate evidence into practice, future initiatives must focus on service innovations that operate within existing constraints. Stepped models, patient-reported outcome measures, telehealth, and machine learning represent promising approaches to achieving this goal. This review summarises the evidence surrounding EPC, outlines key barriers to its delivery and examines emerging strategies to improve its integration into oncological care.

Keywords: palliative care; palliative medicine; medical oncology; molecular targeted therapy; immunotherapy; patient reported outcome measures

1. Introduction

Within the last 16 years, a substantial body of evidence has emerged evaluating early palliative care (EPC) for patients with advanced malignancies [1,2,3,4]. Although these studies have reported some variable results, consensus is that EPC improves outcomes for this patient cohort [5]. Consequently, EPC has been incorporated into several national and international guidelines [6,7]. However, implementation of these recommendations remains limited, rendering them aspirational rather than a reflection of routine clinical practice [8]. Other guidelines still suggest a less proactive approach [9].

This review will explore the evidence surrounding EPC in advanced malignancy and consider why, 16 years on from the benefits being first identified, we are still not achieving it as standard for our patients. It will discuss where EPC fits in the context of newer cancer therapeutics, suggestions on how to bridge the gap between research and reality, and consider how approaches for this may vary depending on setting and local limitations.

Specialist palliative care (SPC) plays an important role in non-malignant disease [10], with the symptom burden being on par with, or higher than, that of malignancy [11]. Patients with non-malignant disease often experience inequitable access to palliative care services [12]. Despite this, the published evidence is more extensive for EPC in malignant than non-malignant disease. Consequently, this article focuses primarily on malignant disease, while acknowledging the need for further research on the role of EPC within non-malignant disease.

The definitions of both ‘early palliative care’ and ‘advanced malignancy’ within published studies vary considerably, creating significant data heterogeneity and limiting the comparability of outcomes. This has led to repeated calls for clearer terminology [13]. In this article, EPC refers specifically to specialist palliative care input unless otherwise stated, in contrast to primary palliative care, which may be delivered by non-specialist clinicians such as general practitioners, oncologists, geriatricians and community health professionals. The concept of ‘early’ also varies widely across studies. On one extreme, inclusion criteria were restricted to patients within 8 weeks of an initial diagnosis of advanced cancer [2] whereas at the other extreme, patients were enrolled despite an estimated prognosis of as little as 4 weeks [14]. Generally, studies classify ‘early’ as within 3–4 months from diagnosis of advanced malignancy.

Similarly, definitions of ‘advanced malignancy’ differ: some use it interchangeably with metastatic disease [2,15], others with incurable or treatment-refractory cancer [16,17], while others specify a limited prognosis [4]. For the purpose of this discussion, ‘advanced malignancy’ is used inclusively to encompass all these definitions. The use of terminology also varies across regions; in the US, ‘hospice’ is generally confined to end-of-life care, whereas in the UK it refers to a broader model of SPC services which extends to those with complex symptoms, who may not be in a terminal phase of their illness [18].

A literature review was conducted across PubMed (https://pubmed.ncbi.nlm.nih.gov/) and Google Scholar (https://scholar.google.com/) between September 2024 and

March 2026. Search terms included "palliative care", "early palliative care", "acute oncology", "malignancy", "advanced malignancy", "referral timing", "barriers to early palliative care", "mechanism-based systemic anticancer therapies", "targeted therapies", "immunotherapies", "patient reported outcome measures" and focussed primarily on manuscripts related to early palliative care in the context of solid organ malignancies published from 2007 onwards. References of included articles were also screened for further relevant articles and resources. Manuscripts not written in English were excluded.

2. Evidence on Early Palliative Care in Advanced Malignancy

It was previously a commonly held belief that palliative care involvement may shorten life or hasten death [19, 20]. Early studies examined this with varying outcomes; some conversely found increased survival [2,20,21,22,23], and some found no benefit to survival [19,24]. There have been no studies showing a significant shortening of life expectancy, as was previously anecdotally assumed.

Quality of life (QoL) metrics for patients with advanced cancer have also been extensively studied, comparing EPC involvement with standard oncological care. Although heterogeneity in methodology and definitions of terms creates challenges with comparing results, early findings reported significant improvements in QoL and mood for patients receiving EPC in comparison with standard care [2,19]. This was further corroborated in patients with a variety of cancer types [4,25]. This impact is independent of psychosocial support alone [3], is likely to be present within 3 months after initial contact with palliative care services [5] and is dependent upon the intensity of the intervention [14,16].

Subsequent meta-analyses agreed that EPC does improve QoL of those with advanced cancers, notwithstanding some had a low certainty/quality of evidence due to heterogeneity of methodology and small number of included studies [5,26,27,28,29]. There is ongoing debate as to whether symptoms, mood and probability of dying at home are also positively impacted [5,26,28].

In summary, despite variability in both the malignancies studied and types of palliative care interventions evaluated, there is a consensus that earlier involvement of palliative care for patients with advanced malignancy leads to better outcomes [5,30]. As a result, international guidelines now recommend integrating early palliative care into standard cancer care. Most notably, the American Society of Clinical Oncology (ASCO) advised in 2017 that patients should see palliative care services within eight weeks of an advanced cancer diagnosis [31], although more recent wording has shifted to 'early' rather than specifying a timeframe [7]. Ongoing research continues to address key questions regarding the optimal nature and timing of EPC interventions [5,32].

3. Discussion

3.1 Early Palliative Care in the Context of Novel Cancer Therapeutics

Since much of the above research was published in support of EPC in advanced malignancy, the oncology landscape has rapidly changed. There is increasingly widespread use of emerging and established mechanism-based systemic anticancer therapies, including endocrine, targeted, and immunotherapeutic agents [33,34,35,36]. These treatments significantly increase survival in many cancer types [33,37,38]. However, they also bring new challenges for oncologists and SPC clinicians, including a more uncertain and unpredictable prognosis, variable disease trajectories, and differing side effect profiles [39,40].

3.1.1 Prognostic Uncertainty

Both patients and oncologists understandably hope for a prolonged effect from these treatments [41]. However, patients eligible for them are less likely to discuss prognosis with their oncologists, and are more likely to receive anticancer treatment in the last month of life, to die in hospital, be admitted to hospital in the last month of life, and have lower use of hospice services [34,42,43]. Living longer with advanced cancer, with a potentially more uncertain prognosis, may also lead to distress around decision-making and planning for the future for patients and families [44,45]. Survivorship issues, such as psychological challenges, may also arise due to an inability to work for a prolonged period, in addition to difficulties with exercise and sexual health [41,46].

3.1.2 Changing Side Effect and Toxicity Profile

Novel agents such as immunotherapies and targeted therapies lead to a different profile of side effects and toxicities compared to conventional treatments [47]. Although generally more tolerable [47], these may involve practically any body system, persist long after treatment, and in some cases may be fatal [44,48,49,50]. They may also mimic clinical deterioration from the cancer; whereas an acute deterioration may have previously represented a natural progression towards the end of life, a similarly presenting condition following immunotherapy may be entirely reversible with high-dose steroids [51,52,53]. Similarly, some targeted therapies may lead to central nervous system toxicity [40], potentially leading to diagnostic challenges in patients already at risk of brain metastases. Such presentations are common [54] and frequently misdiagnosed [55], highlighting the importance of improving recognition and management of these scenarios amongst not only SPC clinicians, but also community, emergency and acute physicians who are likely to encounter such patients [52,56].

Overall, the role of EPC in the context of novel therapeutics and long-term cancer survivorship remains uncertain [41]. SPC clinicians are skilled in managing prognostic uncertainty, complex communication, complex symptoms and emotional distress [57], all of which are likely to be of value for this emerging patient cohort. However, implementation of EPC in this setting would mean supporting a larger number of patients over extended periods as advances in treatment lead to longer survival. This is likely to further strain services already operating at or beyond capacity [58]. Moreover, certain issues such as sexual health remain inadequately addressed within palliative care, despite being recognised as important to patients' quality of life [59]. Supportive care is an emerging specialty which aims to support patients and their loved ones holistically and longitudinally through the whole cancer journey, with a focus on survivorship issues [60,61]. This is a potential avenue through which some benefits of EPC could be utilised for those living longer with cancer.

3.2 Impact of Early Palliative Care Evidence on Practice

Since the publication of the initial studies, patients in some places are being referred to SPC earlier than they were [62,63,64]. However, other studies across a range of countries highlight a persisting failure to integrate EPC for this cohort of patients [8,65,66,67,68]. In particular, a Brazilian study showed an *increase* in late referrals between 2010 and 2014 [69], while studies in Germany and Denmark both highlight a lack of change to referral practices in response to the evidence [70,71].

Suggested reasons for this are mixed. They include clinician concerns around patient response to referral, avoidance of burdening patients with appointments, resource limitations and the rise of the use of novel cancer therapeutics late in the disease [66,67,72]. Despite these clinician-related barriers, patients would generally prefer referral either at diagnosis or during anti-cancer treatment, as opposed to after treatment has ended [68]. This is in alignment with research suggesting this leads to better outcomes [5,26,27,28,29]. Clearly, there remains a significant disparity between what we know leads to better outcomes for patients, and what is currently being provided.

3.3 Reasons for the Persistent Disparity Between Evidence and Practice

3.3.1 Attitudes of Clinicians, Patients and Families

Palliative care clinicians appear to support the concept of EPC for patients with advanced malignancy [73]. However, other healthcare professionals are still referring patients too late, despite an apparent appreciation amongst oncologists of the benefits EPC may provide [66,73]. As non-SPC clinicians are generally the gatekeepers to referral, referrer-related barriers such as the association of SPC with loss of hope, perceptions of patient abandonment, and beliefs that they can manage palliative care alone must be addressed if more patients are to access SPC earlier in their disease [74].

An example of the real-world impact of delayed SPC referral is a patient called Rob. He was a 19-year-old with refractory Burkitt Lymphoma, and is a fictional patient based on real events. He had recently had rituximab, cyclophosphamide, vincristine, doxorubicin, cytarabine and methotrexate (R-CODOX-M), followed by rituximab, ifosfamide, etoposide and cytarabine (R-IVAC) treatments and was admitted to the acute hospital unwell. It was suggested that SPC got involved when his case was presented at the haematology multidisciplinary team meeting. They decided "no, it is too early". He was seen by SPC two weeks later for symptom management, at which point he had not left the hospital room for weeks, was in significant pain and shaking with fear. Input from the SPC team changed everything. They sorted out his symptoms, talked about his fears, gave him time, and said yes to things. He created a bucket list, which was agreed would be a bonus to have worked through if he were to get better. He did many big and small things on that list, largely a result of teamwork between the haematology and SPC teams, who both reflected what a great job they had done. After he died, his mother contacted the SPC team, writing, "we didn't want palliative care to come, we were scared when you came, but I realised that we were already scared. You made all the difference and enabled us to talk with each other. I strongly believe that if your lovely team were able to see him earlier, it would have been so much better for us. I wonder now, when they said seeing him was too soon, too soon for who?".

Rob's story emphasises the disparity between when patients and families would benefit from SPC referral, and when many clinicians believe is an appropriate time to refer. All too frequently, this leads to patients being denied valuable time focusing on what is important to them. A standardised approach to SPC referral may somewhat circumvent these referrer-related barriers and will be discussed in more depth in a later section.

As demonstrated with Rob's mother, patients and families also often hold negative perceptions of SPC, particularly before interacting with the service. It seems these views frequently shift with experience of SPC interactions, becoming more supportive once a better understanding of their role and the potential benefits is understood [75]. Referring clinicians are likely to be aware of these attitudes and may hold similar views themselves, compounding the chance of early SPC referral opportunities being missed [76]. Joint specialty/palliative care clinics [77] may be a way to build bridges, dispel prior misconceptions about palliative care, and improve access to SPC services.

3.3.2 Resource Limitations

Even within high-income countries, most palliative care services lack sufficient resources to provide universal EPC to all patients with advanced cancer [78]. This is further complicated by a reliance upon unstable funding streams such as charitable donations [79]. Although funding shortfalls are increasingly recognised [80], public finances remain tight. As a result, the significant change to funding needed to facilitate universal EPC is unlikely, prompting claims it is aspirational and unachievable [81]. Possibly in recognition of this, despite the evidence for EPC, the National Institute for Health and Care Excellence (NICE) currently only recommends SPC input when other clinicians are unable to cope [9]. Innovative approaches are therefore required to deliver the well-established benefits of EPC despite current resource constraints.

3.3.3 Inequality in Access to Palliative Care Services

There is significant variation in access to SPC both between and within countries. A systematic review of SPC referrals worldwide, although not purely for malignant disease, identified that the median number of days palliative care was provided before death varied widely between high-income countries; from 6 days in Austria to 69 days in Canada [8]. Even within the US, the amount of time from SPC referral to death is significantly higher from National Cancer Institute (NCI)-designated cancer centres than non-NCI-designated centres [82]. Access to SPC is also worse for socially deprived and ethnic minority groups, in addition to varying depending on location [83,84]. Within low- and middle-income countries, access to SPC is often minimal despite accounting for 80% of the global need [85], a problem compounded by a dearth of robust data on the state of services within these countries [8]. Such variation suggests that the reasons for the inequality are complex and multi-factorial, highlighting the importance of policies being tailored to unique local challenges [78].

In summary, reasons for the current lack of universal EPC implementation despite the evidence are multitudinous and heterogeneous. They are likely insurmountable with EPC in its original form. A single approach will not address the referrer-related barriers, access disparities related to healthcare infrastructure, as well as broader resource limitations. Each of these challenges requires tailored approaches informed by high-quality research, a thorough exploration of all of which is beyond the scope of this article. Given resource constraints represent a major barrier for many SPC services, and considering recent developments reported in the literature, the present article will focus primarily on approaches to mitigate these.

3.4 Innovative Approaches and the Path Ahead

3.4.1 Beyond Early Palliative Care

In response to the significant resource constraints outlined above, work is ongoing to explore alternative models to systematic EPC that are equally effective but more realistically implementable.

Patients who derived the most benefit from the original EPC model were those with the highest symptom burden [86]. In response, 'timely palliative care' models have been proposed in which the timing of the initial SPC referral is tailored to individual patient need, thereby directing limited resources where they are needed most [32]. Efforts to standardise this approach have employed a range of referral triggers. These include utilising pre-defined thresholds on validated patient-reported outcome measures (PROMs) such as the Edmonton Symptom Assessment Scale [87], and the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire [88]. Patient-reported factors, such as physical symptoms or emotional distress, have subsequently been combined with objective measures such as diagnosis or prognosis amongst other factors, to propose specific criteria to trigger SPC referral in different cancer types [30,89,90].

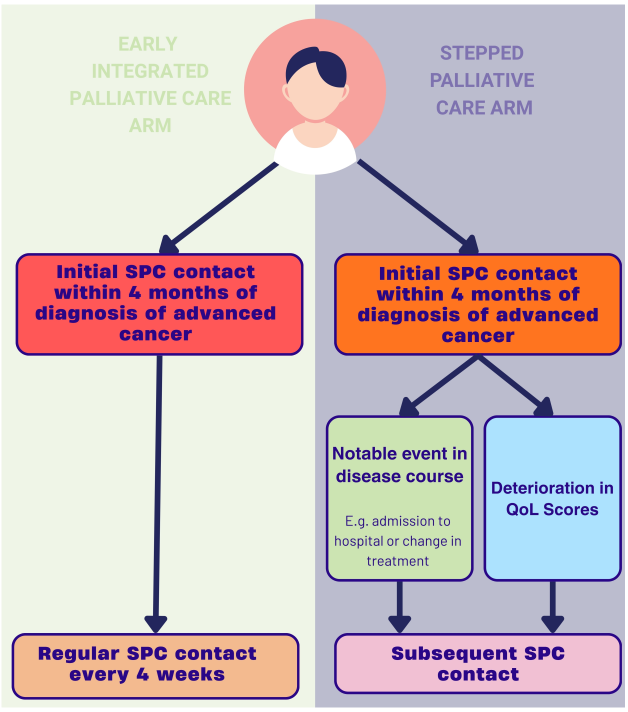

Fig. 1. Early palliative care versus a stepped care model [91]. SPC, specialist palliative care; QoL, quality of life.

More recently, a stepped palliative care model has been developed. This approach involves regular symptom monitoring, with SPC input increased only when a patient's need for this is identified [91]. A non-inferiority randomised controlled trial compared stepped care with the original EPC model for patients diagnosed with lung cancer or mesothelioma within the preceding 12 weeks, a predicted prognosis of less than 12 months, no curative treatment intent and an Eastern Cooperative Oncology Group (ECOG) performance status of 0–2. As seen in Fig. 1 (Ref. [91]), all patients had an initial SPC consultation within 4 months of diagnosis. Patients randomised to the EPC arm subsequently received systematic SPC follow-up every 4 weeks. In contrast, those randomised to the stepped care arm only received further SPC input if predefined escalation criteria were met: either a notable event such as a hospital admission or change in cancer treatment, or a drop of 10 points or more on the Functional Assessment of Cancer Therapy–Lung (FACT-L) quality of life questionnaire (which patients in the stepped care arm were required to complete every 6 weeks). Once escalation was triggered, patients received SPC follow up every 4 weeks thereafter. By 24 weeks after enrolment, approximately one quarter of patients in the stepped care arm had triggered an escalation of SPC involvement, which increased to around a third by 48 weeks. As all the patients in this study had either lung cancer or mesothelioma, further research is required to ascertain whether these results would be generalisable across cancer types.

Although only 26.4% of patients in the stepped care arm had received intensive SPC input at 24 weeks, compared with 100% in the EPC arm, outcomes remained encouraging. There were no significant differences between the EPC and stepped care groups in QoL measures, or in the proportion of patients who had discussed their end-of-life care preferences with their healthcare team. This equivalence was observed despite substantially fewer encounters with SPC in the stepped care arm, with an average of 2.4 appointments as opposed to 4.7 in the EPC arm. Specific financial and resource implications were not made explicit, and there are likely to be upfront costs associated with the implementation of new PROMs into clinical workflow and information technology systems. Nevertheless, this reduction in clinical contact with equivalent patient outcomes is likely to translate into long-term cost and resource savings. While concerns remain that even this model may be too resource-intensive for many palliative care services [81], it provides a valuable foundation for further research.

Other innovative strategies to improve services within existing constraints are also emerging: telehealth delivery of SPC has shown equivalent outcomes to in-person care [92], while machine learning may help target SPC input at more appropriate times [93].

One machine-learning model predicted risk of death within one year after cancer treatment through pooling patients' laboratory values, demographics and history of hospital admissions [93]. Results were then used to allocate early palliative care according to prognosis, leading to an increase in EPC access for patients with shorter prognoses, without unnecessarily increasing access for those with prognoses over 2 years. This led to an effective reallocation of existing resources to improve appropriate EPC access within unchanged capacity constraints. Although other important factors such as symptoms were not considered, it showed that machine learning has the potential be a useful tool to aid more efficient resource allocation. While telehealth delivery of SPC and machine learning are not comprehensive models of palliative care delivery in themselves, these approaches may be used in combination with broader frameworks such as the stepped model to further streamline services.

3.4.2 Organisational Change

In contrast to the stepped model, most SPC services currently rely on referral systems in which non-SPC clinicians determine when specialist input is needed [94]. Although endorsed by NICE and National Comprehensive Cancer Network (NCCN) [9,95], this approach often underestimates patient symptom burden [96] and is subject to referrer-related barriers as discussed above [74]. For inpatient teams focused on life-sustaining treatments, the appropriate timing of referral to palliative care is particularly challenging [97,98]. Shifting towards utilisation of PROMs to trigger SPC referral, such as those in the stepped model, would require changes to national guidance, substantial logistical and cultural adaptation within individual services, in addition to investment.

For example, a reliable system for collecting responses to PROM questionnaires, which is user-friendly while ensuring secure storage of confidential data, would be essential. This would require investment in hardware to enable patients to complete digital forms, the development and programming of appropriate software and integration with existing local information technology systems. Some patients may be unable to complete online forms [99], necessitating staff time to transcribe paper-based responses into a digital database. Collectively, these factors would be expected to incur considerable initial costs alongside the staff training required, before any overall cost savings are later realised [100]. At the governmental level, prioritising stable funding streams would be essential to support this transition. Similarly, investment in hardware, software and staff training would be required for both integration of machine learning and telehealth into SPC services.

In summary, while several avenues are being explored to limit the impact of resource limitations on EPC availability, further work is required to establish an approach which is feasible and widely acceptable to SPC services. The stepped model has shown encouraging results, although further evaluation of the financial aspects of this compared with both universal EPC and existing services is needed. Further research is also required to establish its effectiveness in pathologies other than lung cancer and mesothelioma. PROMs are increasingly being incorporated into clinical services [101], although if used outside of a wider framework such as stepped care, they are more likely to address referrer-related barriers than generate substantial cost savings for SPC services. Other approaches, such as machine learning and palliative care via telehealth delivery, remain at early stages of development. While these strategies are promising and may offer useful elements that could be adapted by some services depending on local context, in their current form, these do not yet represent a fully implementable model.

It is important to highlight that while these innovations may become of use within higher-resource settings, caution must be taken to avoid recommendation of rolling out within the Global South a 'gold standard' of care based upon research performed in the Global North. Instead, local research must be supported to inform more contextually appropriate service improvements [102]. Malawi is a low-income country (LIC) which has utilised community health professionals to improve SPC services in recent years [103], becoming the only LIC to have achieved the highest level of SPC integration into health services [102]. Ground-up approaches such as these, based upon local research, are important to empower countries and regions to create interventions acceptable within their culture, which address their own unique challenges [78].

4. Implications for Research

As advances in cancer therapeutics reshape the experiences of people with advanced malignancies, the role of EPC within this context must be evaluated. Future studies should also further explore innovative, less resource-intensive strategies to deliver the benefits of EPC across different settings. This should include further development of the stepped model, including within different disease processes, methods of integration of machine learning and telehealth, as well as the financial implications of these approaches. Generating robust data on the current state of SPC services worldwide is also essential both as a foundation to address global inequalities in SPC access, and to develop palliative care models that are effective and contextually acceptable [8].

In research, the term 'advanced malignancy' must be clearly defined. It is unsurprising that this term creates confusion: while it often refers to non-curative, metastatic disease [2,15], it may also refer to non-metastatic or potentially curative malignancies [104,105,106,107]. This inconsistency reduces comparability across studies and introduces significant heterogeneity [26]. For meaningful translation into clinical practice, it is essential that the patient population is consistently and clearly defined, ensuring that evidence can be appropriately applied to service development and improvement.

5. Limitations

As this is a narrative review intending to provide a broad overview, it may not have included all relevant published texts on this topic. It is subject to the bias of the authors' own interpretations of the literature.

6. Conclusion

We know that the experiences of patients with advanced cancer are better if specialist palliative care services are involved early. The lack of widespread adoption of EPC, despite this, is related to a multitude of factors, not least that the resources available to many services are not sufficient to provide it. The paradigm shift in cancer therapeutics has also muddied the waters of where SPC fits within this, given more uncertain disease courses and increased survival.

As resource constraints remain significant and cancer therapeutics continue to advance, the concept of EPC must evolve. The stepped model begins to address how to provide the benefits of EPC within resource constraints, although it requires further research to determine the cost savings and impact for patients with different pathologies. In the age of newer cancer therapeutics, perhaps combining further-refined stepped models and PROMs with machine learning may go some way to ensure patients are receiving SPC at an appropriate time in their disease, when prognostication is becoming increasingly difficult. For patients, this may mean improved access to SPC when it would be beneficial to them. For services, this may enable the provision of the benefits of EPC where they are most needed within limited resources, although it would require significant organisational change to enable. Importantly, for low- and middle-income countries where barriers are often distinct and more pronounced, locally driven research is essential to shape palliative care models that are both contextually appropriate and sustainable.

Key Points

- Early palliative care (EPC) improves quality of life in advanced cancer and is endorsed by multiple national and international guidelines.
- Despite the evidence demonstrating its benefits, EPC remains largely aspirational, not least due to limited resources.
- Access to EPC is also hindered by clinician reluctance to refer to SPC and ongoing patient/family stigma towards palliative care.
- Stepped models combined with PROMs, telehealth and machine learning may be a more resource-savvy method of providing patients with the benefits associated with EPC within limited resources.
- A key challenge remains the development of a model that is acceptable and feasible to existing services, which can deliver the benefits of EPC within constrained resources; embedding such a model is likely to require substantial investment and organisational change.
- Further research is needed to examine the financial implications of such models and to clarify the term 'advanced malignancy' within research.

Availability of Data and Materials

Not applicable.

Author Contributions

NW and FD designed the review. FD conducted the research and drafted the manuscript. Both authors contributed to critical revisions of the manuscript. Both authors read and approved the final manuscript. Both authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

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Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of AI and AI-Assisted Technologies in the Writing Process

During editing of the original manuscript, ChatGPT-5.3 was utilised to suggest minor rewording of some sections to aid clarity and readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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