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COMMENTARY

Redefining oncology nursing: Strategic roles in integrated care pathways

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Abstract

Contemporary oncology is increasingly characterized by prolonged survival, treatment complexity, and the consequent transformation of cancer into a chronic or long-term condition. These developments have produced significant clinical benefits, but they have also increased organizational and care multidimensionality, with pathways that are often fragmented and variable across different settings. In this context, nursing assumes a transversal role, coordination, and coherence within multidisciplinary oncology pathways. Advanced nursing roles—including Case Manager Nurses, Nurse Navigators, and Oncology Specialist Nurses—facilitate coordination, support clinical decision-making, promote patient empowerment and therapeutic education, while simultaneously reducing the organizational and cognitive burden on patients, families, and their communities. The integration of digital tools, hybrid care models, and community-based interventions further strengthens nurses' capacity to ensure quality, adherence, and safety of care. The heterogeneity of care models reflects the elaboration of real-world oncology, but it may compromise effectiveness if not guided by evidence-based practices. Nurses, thanks to their longitudinal and systemic perspective, act as regulators of complexity, translating evidence into context-adapted pathways while maintaining high standards of quality. Recognition and institutionalization of advanced nursing competencies are therefore essential to ensure coherent, equitable, and sustainable oncology care globally.

Keywords: Oncology nursing; Advanced practice nursing; Integrated care; Continuity of patient Care; Cancer

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1. Introduction

Contemporary oncology represents one of the most complex clinical and organizational contexts within modern healthcare systems. Globally, cancers represent a relevant and rapidly increasing burden: in 2022, an estimated 20 million new cancer cases and 9.7 million cancer-related deaths were recorded worldwide, with social and economic disparities globally.[1] The overall global cancer burden is predicted to rise to over

35 million new cases annually by 2050, an increase of roughly 77% driven by population aging, population growth, and changes in exposure to key risk factors. These epidemiological trends underscore undeniable clinical benefits from advances in detection and treatment, but they have also generated increasing care complexity, with treatment pathways that are longer, more intricate, and fragmented.[2] The value of an oncology system can no longer be assessed solely on treatment efficacy or survival outcomes. Consistency of care, quality of life, management of care transitions, organizational sustainability, and equitable access have become central elements in evaluating overall care quality. In this scenario, nursing care plays a strategic role, functioning as a key component of oncology pathways—often not always visible, yet highly influential in shaping care processes and outcomes.[3] Within contemporary healthcare governance models and oncology policies, the contribution of nursing is recognized as a structural component of care, aligned with internationally acknowledged approaches to oncology care.[4] Oncology care can no longer be interpreted as a linear sequence of clinical events, but rather as a systemic process evolving over time and across multiple care settings. Diagnosis, treatments, toxicity management, follow-up, recurrence, and palliative care constitute a continuum characterized by high individual variability and frequent care transitions.[4,5] This intricacy highlights the limitations of organizational models based primarily on episodic or performance-driven logic, which struggle to support fully coherent and continuous care. Without structured, system-level coordination, patients and families may be required to navigate services and professionals independently, potentially impacting treatment adherence, safety, and equitable access.[6] In this complex level of care context, nursing can play a transversal role across the oncology pathway, contributing to a longitudinal perspective on care. Nurses can early identify clinical and psychosocial instability, anticipate potential complications, and contribute to continuity, thereby reducing fragmentation and improving the overall patient experience.[4-6] This communication primarily aims to critically bring to the attention of the international scientific community the current models of nursing care delivery in oncology, with particular focus on the role of nurses within increasingly complex and heterogeneous care systems, which nevertheless place the well-being of cancer patients at their core. Secondarily, it seeks to highlight how nursing care can today represent a central element in processes of integration, continuity, and coherence of care along the entire patient care pathway, contributing to the development and strengthening of increasingly personalized care models oriented toward a more articulated, multidimensional, and multidisciplinary approach to care management.

2. Advanced nursing roles in continuity, integration, and complexity management in oncology

Oncology nurses increasingly assume structured roles within multidisciplinary care systems, ensuring integration among professionals, services, and levels of care. This role does not imply hierarchical centrality, but reflects the nurse's capacity to translate clinical decisions into actionable and accessible care practices, facilitate communication among stakeholders, and support decision-making, in line with international frameworks for advanced nursing practice and integrated care promoted by the International Council of Nurses (ICN).[7] In highly specialized settings, the ability to integrate information, coordinate interventions, and maintain a patient-centred focus is essential for ensuring coherent, understandable, and implementable care pathways, while reducing the organizational and cognitive burden on patients, families, and the broader community.[8] Within this care framework, the roles of the Case Manager Nurse (CMN) and the Nurse Navigator (NN)—terms and clinical configurations that are not universally standardized and may vary significantly across organizational contexts, both in terms of competencies and levels of autonomy—can represent valuable approaches to promoting continuity, appropriateness, and equity in oncology care pathways.[9-11] In oncology and, more broadly, in chronic care settings, the CMN can be understood as a professional with a systemic function, responsible for coordinating clinical, care, and social interventions, with the aim of ensuring integrated, appropriate, and sustainable care throughout the entire care pathway. This role is typically well established in high-complexity care settings.[9,10] The NN, also characterized by considerable variability across healthcare models, can be defined as a role primarily focused on the early phases of the care pathway and on key transition points, with the task of facilitating access to services, guiding patients within the healthcare system, and reducing the emotional and organizational burden associated with illness.[11,12] The synergy between these roles helps reduce pathway fragmentation, limit access disparities, and enhance efficiency and overall patient experience, representing strategic levers for healthcare systems.[7] The evolution of oncology therapies, characterized by increasing multidimensionality and personalized approaches, has made the role of Specialized Oncology Nurses (SON) indispensable. These professionals, equipped with advanced skills in side-effect management, clinical monitoring, and therapeutic education, ensure patient safety, treatment adherence, and support for complex

clinical decision-making.[13] SON combine technical expertise with communication, decision-making, and clinical leadership skills, acting as strategic nodes between multidisciplinary teams, patients, families, and the wider community, in accordance with competency-based models for specialist nursing roles promoted by European Specialist Nurses Organisation (ESNO).[14] Institutional recognition of these roles, together with the adoption of structured organizational and educational models, is essential to ensure the sustainability and effectiveness of oncology systems. Such measures enable the systematic integration of advanced competencies, promote clear responsibility distribution, standardize clinical and care pathways, and define shared quality criteria, as advocated by International Council of Nurses (ICN) and European Specialist Nurses Organisation (ESNO) in their respective frameworks for advanced and specialist nursing practice.[7,14] Investment in specialist training and the valorization of advanced nursing roles not only supports therapeutic innovation but also improves treatment adherence, patient safety, and continuity of care, ensuring coherent, uniform, and high-quality care pathways in full alignment with international best practices and principles of equity and system integration.[7-14]

3. Nurses as strategic elements in integrated oncology pathways for empowerment, therapeutic education, and community-based care models

Therapeutic education and patient empowerment are now fundamental components of integrated oncology pathways, critical to ensuring safety, efficacy, and sustainability of treatments. In contexts where many therapies are administered at home or in community settings, patients' ability to understand, monitor, and manage their condition is essential for care success.[15] Nurses, as important components of healthcare systems, can help translate clinical intricacy into practical knowledge, support self-management, and encourage active patient participation, acting as partners in the co-construction of care pathways.[16] Simultaneously, digitalization and hybrid care models have expanded the ways nurses can ensure continuity and quality. Telemonitoring, digital platforms, and decision-support tools enable continuous monitoring and timely intervention, while nurses act as mediators between technology and the care relationship, integrating clinical, organizational, and ethical competencies. This ability to combine digital innovation with patient-centred care strengthens the nurse's strategic role within clinical pathways, ensuring integration, coherence, and adherence throughout the oncology trajectory.[17] In community-based settings, nurses play a critical role in implementing advanced care models, facilitating service access, coordinating multidisciplinary interventions, and reducing the organizational and emotional burden on patients and families. Their strategic function ensures continuity of care across hospitals, territories, and home settings, consolidating quality, equity, and efficiency within oncology pathways.[18] The integration of therapeutic education, empowerment, technology, and community-based care models makes the nurse an indispensable reference point in modern oncology pathways, capable of supporting therapeutic innovation, enhancing treatment adherence, and ensuring standardized, safe, and high-quality care that is fully aligned with international best practices.[19]

4. Heterogeneity of care models and the role of evidence-informed care across settings

Contemporary oncology care is characterized by profound heterogeneity in care models, reflecting disease density, varied care settings, and differences across healthcare systems.[20] Such heterogeneity should not be viewed solely as a challenge, but recognized as an inevitable structural limitation of modern oncology pathways.[20,21] Care occurs across hospitals of high specialization, territorial services, home care, dedicated clinics, and hybrid models supported by telemedicine. Each setting imposes specific constraints in terms of professional resources, care intensity, patient proximity, and capacity to meet complex needs. In this context, absolute standardization is not only unrealistic but may result in models that are formally correct yet substantially ineffective.[22] The primary limitation arises when adaptation to context is driven not by scientific evidence but by contingent logic, local traditions, or organizational opportunities. Without robust reference to available evidence, care models risk becoming isolated experiences, difficult to evaluate, and scarcely transferable. In oncology, much evidence derives from highly controlled contexts and is often not directly applicable to the complexity of real-world settings.[23] Therefore, the challenge is not the absence of evidence, but translating it into adaptable care models without loss of coherence and quality. In this respect, evidence-informed care integrates scientific evidence, professional expertise, and contextual specificity, guiding adaptation of care pathways.[24] Nurses occupy a structured position in this process. Due to their transversal and longitudinal role, they observe the real impact of care models across different settings and assess sustainability, appropriateness, and responsiveness to patient needs.[25] Advanced roles such as CMN, NN, and Specialist Nurse demonstrate how relevant functions can be applied across settings while maintaining a common

core of competencies and objectives. Nurses thus act as regulators of care, ensuring coherence, integration, and quality across oncology and clinical pathways.[24,25] The true limitation does not lie in model heterogeneity, but in the absence of conceptual, organizational, and systemic support mechanisms capable of managing it. Without shared terminology, common indicators, and clearly defined advanced nursing competencies, adaptation to different settings may become arbitrary and heavily dependent on local resources, with particularly relevant impacts in low- and middle-income countries, where economic constraints, workforce shortages, limited infrastructure, and social disparities represent evident barriers to implementing coherent and effective care models.[3,20,22] In truly modern oncology, the goal is not uniformity of care models, but systemic coherence and the ability to adapt sustainably across contexts.[26] This requires acknowledging heterogeneity as a structural limitation, ensuring that every adaptation is guided by best available evidence, supported by a strong, competent nursing workforce recognized as a regulator of care, and reinforced by organizational and policy strategies that consider economic, social, and structural challenges across healthcare systems.[7,14,27–30]

5. Limitations and implementation considerations

This communication is based on a narrative synthesis of the international literature and established conceptual frameworks in oncology and integrated nursing care, with the aim of supporting academic and clinical reflection rather than producing empirical evidence. As a conceptual work not grounded in a systematic review or primary data, the evidence considered is necessarily heterogeneous in terms of methodological rigor and contextual applicability, reflecting the diversity of sources and healthcare settings addressed. The advanced nursing models discussed, including CMN, NN, and SON, are well described in the international literature; however, their implementation in practice shows considerable variability across healthcare systems. This variability is largely shaped by regulatory, organizational, and contextual differences, as well as by differing levels of system maturity, which may affect their direct and uniform transferability across settings. Accordingly, the discussion should be interpreted within the limits of a conceptual contribution that does not aim to provide a systematic or comparative evaluation of these models, but rather to offer a broad interpretative framework to support reflection and further inquiry. The adoption of advanced, integrated, and digitally supported oncology care models is also constrained by relevant structural factors, including workforce availability and distribution, the need for specialized clinical and digital competencies, and the requirement for continuous investment in education and training. Additional influencing factors include infrastructural readiness, the level of interoperability of health information systems, and organizational and cultural conditions that may either enable or hinder innovation. A further dimension relates to economic implications, which are only partially addressed in this work. The transition toward more integrated and technologically advanced models involves both initial and ongoing costs, which may be difficult to sustain in resource-limited settings, potentially exacerbating existing inequalities in access to advanced care. Finally, the international applicability of these models must be interpreted with caution, as differences in healthcare system structures, financing mechanisms, and social determinants of health substantially influence the feasibility and sustainability of implementation strategies. Accordingly, the proposals discussed should be understood as adaptable principles rather than universally standardized models. Despite these limitations, the role of nursing in ensuring ongoing progression, integration, and patient-centred care remains consistently supported in the international literature. Further research is needed to explore implementation strategies, economic sustainability, and the real-world impact of advanced nursing models in clinical practice.

6. Conclusion

In conclusion, modern oncology requires care models capable of integrating scientific innovation, organizational sustainability, and equity in access to care within a global perspective. Within this framework, nursing could play an important role in supporting the management of clinical and organizational practice and in promoting continuity along the cancer care pathway across different settings. The ongoing evolution of oncology care delivery highlights the growing relevance of the nursing profession, particularly in relation to the development of advanced competencies and specialist roles. Strengthening these aspects could contribute to addressing current and future challenges in oncology practice. Overall, this perspective could support the promotion of coherent, safe, and quality-oriented care pathways aligned with the broader objectives of contemporary healthcare systems.

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