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## Italian Association of Oncology Nurses (AIIAO)

AIIAO (Italian Association of Oncology Nurses) is the national scientific association dedicated to advancing oncology nursing practice, education, research, and innovation in cancer care across Italy. Bringing together nurses, researchers, educators, managers, and healthcare professionals, AIIAO promotes evidence-based practice, professional development, and person-centred care. Through its congresses, educational initiatives, and scientific activities, the Association fosters the exchange of knowledge and the development of specialist competencies in oncology nursing. This Abstract Book presents the scientific contributions selected for the AIIAO 2026 Congress, showcasing research, innovations, and experiences that reflect current priorities and emerging directions in cancer nursing. The collection highlights the diversity of perspectives contributing to the advancement of oncology nursing and cancer care.

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## EDITORIAL



## COMMENTARY



## ABSTRACTS

ij Health Supplements

June 3, 2026 - Rome Volume 1 Issue Supplement 2

## ABSTRACTS

*Case Manager within the Oncogenetic Pathway*

- *Digitalization of the Oncology Care Pathway: Integration of APOTECAchemo Robotic Compounding and the Electronic Health Record. Benefits for Safety, Quality, and Process Organization*
- *Co-Design of Educational and Digital Interventions in Oncohematology: A Scoping Review*
- *Advanced Competencies in Oncology Nursing: A Framework for Clinical Practice and Care Outcomes*
- *Factors Associated with Early Diagnosis and Access to Care among Immigrant Women with Cervical Cancer in Italy: Protocol for a Multicenter Mixed-Methods Study*
- *Patients Undergoing Chemotherapy Desensitization: A Pilot Study on Emotional Impact of Hypersensitivity Reactions and Evaluation of a Printed Educational Tool*
- *Palliative Care in the Emergency Department: Exploring Nurses' Educational Needs Through an Italian Convergent Mixed-Methods Approach*
- *COMPASS-ONC: Explainable Artificial Intelligence for the Early Identification of Palliative Care Needs in Oncology*
- *Patterns of Missed Nursing Care in Oncology: An Observational Study in a Primary Nursing Context*
- *Care Needs in Cancer Survivorship: A Scoping Review*
- *Virtual Reality During Chemotherapy: Cybersickness and Patient Satisfaction*
- *The Use of Patient-Reported Outcome Measures (PROMs) in Cancer Patients with Penile Cancer: A Scoping Review*
- *Operating Room Nurses' Knowledge of Patient-Reported Outcome Measures and Patient-Reported Experience Measures in Oncological Surgery*
- *Cancer Care in Humanitarian Crises: A Scoping Review of the Impact of the Conflict in the Gaza Strip (2023–2026)*
- *Longitudinal Assessment of Financial Toxicity in Oncology: Observational Study Protocol*
- *The Use of Patient-Reported Outcome Measures in Simultaneous Palliative Care Pathways in Oncology: A Scoping Review*
- *Caring Through Food: The Impact of Food Aesthetics on Patients' Experience in Care Settings*
- *From Late Access to Early Identification: A Community Nursing Model for Activation of the Palliative Care Network*
- *Development and Adoption of Competency Profiles in a Hematology-Oncology Department: Enhancing Specialist Competencies for the Safety and Effectiveness of Care Processes*
- *Organizational Innovation and Clinical Outcomes: The Case Manager's Contribution to Personal Care*
- *Dignity in Chronic Illness: Development and Validation of the Patient Dignity Inventory for Chronic Illness (PDI-CI)*

## ABSTRACTS

- *Prevention of Chemotherapy-Induced Alopecia Through Scalp Cooling: Experience from an Oncology Day Hospital*
- *Proper Management of PICCs and Port-a-Caths: From Scientific Evidence to Clinical Practice. The Experience of the "S. Maria" Hospital of Terni*
- *Soft Skills and Emotional Intelligence in Oncology Nursing*
- *Integration of Nursing Clinical Research and Organizational Research: The Role of Leadership in Nursing Directorates*
- *Nursing Therapeutic Education for Home Management of 5-FU via an Elastomeric Infusion Device: Development and Validation of Operational Tools*
- *Adapted Physical Activity in Oncology: The Nursing Role in a Dedicated Care Model with Potential Multicenter Application*
- *Informal Peer Support Network for Oncology Nursing Research: From Training Experience to Initial Mentoring Services*
- *The Use of Artificial Intelligence Tools in Nuclear Medicine to Promote Patient Communication, Education, and Compliance*
- *The Role of the Oncology Pivot Nurse: The Care Relationship and Responsibilities Across the Patient Care Pathway*
- *From Transition Clinic to Nursing Leadership: Adapting an Evidence-Based Model from Congenital Heart Disease to Oncology*
- *Safety of the Antineoplastic Drug Process and the Nurse's Role in the Antineoplastic Drugs Unit*
- *Impact of an End-to-End Procedure on Extravasation Events During Intravenous Chemotherapy*
- *Impact of Peripherally Inserted Central Catheters on Pain and Quality of Life in Patients With Cancer*
- *Ethical and Organizational Factors Related to Oncology Nurses' Intention to Leave: Preliminary Results of a Descriptive Correlational Study*
- *Self-Care in Patients Undergoing Hematopoietic Stem Cell Transplantation: A Scoping Review*
- *Intensive Longitudinal Monitoring of Symptom Patterns in Patients With Melanoma Treated With BRAF/MEK Inhibitors: A Pilot Study*
- *Value Health System and People Management: Enhancing Human Capital and the Visibility of Nursing's Contribution*
- *Ethical Leadership in Healthcare Professions: Conscience, Ethical Reasoning, and Decision-Making Responsibility in Healthcare Management*
- *Older Adults, Loneliness, and Social Isolation in Cancer: Clinical Factors and Equity Dimensions—A Rapid Review*
- *Infusion Safety in Oncology: Protocol for a Multicenter Study of Air-in-Line Alarms During Antineoplastic Drug Administration*
- *From Volume to Value: The Strategic Role of People*

ij Health Supplements

June 3, 2026 - Rome Volume 1 Issue Supplement 2

## ABSTRACTS

## Editorial

# Innovation, Evidence, and Proximity in an Age of Compressed Futures: Oncology Nursing and the AIIAO 2026 Congress

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Oncology has rarely promised so much, and rarely asked so much of the professionals expected to translate that promise into care. Precision therapeutics and immunotherapy have redrawn the prognostic landscape of diseases that, a generation ago, admitted far less hope. Electronic patient-reported outcome systems have improved symptom monitoring and patient-reported outcomes, and earlier trial evidence suggests that, when embedded in responsive clinical workflows, systematic symptom surveillance may even be associated with longer survival (Basch et al., 2017, 2022). Video-delivered early palliative care has also been shown to produce quality-of-life outcomes equivalent to in-person delivery among patients with advanced lung cancer (Greer et al., 2024). Read from the vantage point of the research literature, the future of cancer care appears increasingly bright. Yet the same health systems expected to deliver that future are operating under conditions that make it feel repeatedly deferred: the World Health Organization estimates a global nursing shortage of 5.8 million nurses in 2023, projected to remain 4.1 million by 2030 (World Health Organization, 2025); public budgets are constrained; populations are ageing and increasingly multimorbid; and the global burden of cancer continues to rise (Kocarnik et al., 2022). This is the compression in which contemporary oncology nursing now works: between a scientifically plausible future of unprecedented therapeutic possibility and an economically, demographically, and organizationally uncertain present.

This compression is not only material. It is also cultural. Zygmunt Bauman described late modernity as "liquid": a condition in which institutions, careers, and collective identities lose the solidity that once allowed people to plan their lives within them, leaving individuals to absorb systemic uncertainty as if it were a private burden (Bauman, 2000). Healthcare is not exempt from this condition. The vocabulary that now circulates in the nursing workforce

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literature (e.g., burnout, moral distress, intention to leave, disengagement, and most recently quiet quitting) reads like a clinical chart of liquid modernity entering the hospital. Quiet quitting, commonly understood as remaining in post while withdrawing discretionary effort and engagement, should not be reduced to anecdote or generational stereotype. Recent multicentre evidence from hospital settings suggests that such behaviours may be widespread and closely associated with burnout and job satisfaction (Ghahramani et al., 2026). It would be a serious interpretive error to read this as a moral failing of professionals. Disaffection is better understood as a signal: of perceived organizational injustice, of meaning eroded, and of the widening gap between what nurses were trained to value and what systems allow them to enact. Signals should be measured, interpreted, and answered; not moralized.

Nurses in oncology fields occupy the precise point at which this compression becomes visible, because nursing is where the promissory language of innovation meets the finite reality of a shift, a consultation, a ward, a home visit, or a telephone call from a patient in distress. Every breakthrough (e.g., a new oral anticancer agent, a remote-monitoring platform, an artificial-intelligence triage tool, a redesigned survivorship pathway) becomes real, or fails to become real, through nursing work. Nurses integrate innovations into pathways, explain them to patients and families, monitor their consequences, compensate for their gaps, and often absorb their unintended effects. When adoption outpaces role design, staffing, training, and accountability, innovation stops being a promise and becomes a load. The question facing oncology nursing is therefore not whether to embrace the future, but how to govern the terms on which that future arrives.

The title of the AIIAO 2026 Congress is "Innovation, Evidence, and Proximity" and should be read in this light, not as a slogan, but as a disciplinary strategy. Each term names a different counter-move to liquidity. Innovation asks not only what can be introduced, but under what conditions it becomes care rather than burden. Digital health, advanced technologies, and new organizational models are opportunities only insofar as they are accompanied by explicit role definition, competency frameworks, adequate training, and attention to equity; otherwise, they risk widening digital and organizational divides within the profession and among patients. Evidence is the counterweight to both hype and fatalism. It turns enthusiasm into testable programmes, turns discouragement into tractable problems, and supports the deliberate engineering of professional development, including the international consolidation of advanced practice roles in cancer care (Dowling et al., 2024). Proximity is nursing's most distinctive answer to a liquid world. Where institutions feel unstable and futures uncertain, relational continuity, which means being reliably present across the trajectory of illness, from hospital to community and from treatment to survivorship or palliation, restores a form of solidity that no technology can replace and that every technology should ultimately serve.

The scientific programme of the congress operationalizes this triad deliberately. It begins from proximity: continuity-of-care models, individualized care planning as a digital instrument, and the implementation of Italy's territorial-care reform are placed at the centre of the discussion rather than treated as organizational background. It then moves through innovation and specialist competence: device selection, infusion safety, standards of excellence, and Entrustable Professional Activities are addressed as practical infrastructures through which oncology nursing can make advanced care safer, more consistent, and more accountable. Finally, the programme turns to evidence, networks, and impact in Italian and European perspective. This includes, not incidentally, an explicit session on quiet quitting and its implications for the profession, and a lecture on the language of nursing itself: standardization, guidelines, and good practices as the grammar through which a discipline makes its knowledge durable. A profession that names its own disaffection from the podium, rather than leaving it to corridor conversation, is a profession treating uncertainty as an object of inquiry rather than as a private burden.

This special issue extends that stance from the podium to the page. The commentary that opens it applies lexicometric analysis and topic modelling to the corpus of abstracts included in the AIIAO 2026 proceedings, identifying five latent thematic areas: care pathways and procedural safety, self-management and adherence, research capacity and symptom-distress measurement, professional roles and leadership, and palliative and supportive care

(Caruso et al., 2026). These topics are offered prudently: not as a representative map of the entire field, but as a reproducible observatory of the priorities made visible by a scientific community at a specific moment in its development. The corpus itself, however, conveys a message that no statistical model could detect. The congress received 91 submissions, the largest volume of scientific work ever submitted to an AIIAO congress, of which 82 accepted abstracts entered the final proceedings. In a season often described in the language of disengagement, an entire professional community chose to respond to uncertainty with data, projects, peer review, and public scientific exchange. That choice is not a statistical finding but a disciplinary signal. Between the future promised by research and the present constrained by systems, Italian nurses working in every oncological field appear to have located a third position: neither naïve optimism nor quiet withdrawal, but engaged, measurable, and cumulative work. It is the position this journal exists to document, and the one this congress exists to sustain.

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## Commentary

# Mapping the Scientific Agenda of Italian Oncology Nursing: A Topic Modelling Commentary on AIIAO 2026 Congress Abstracts

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### Abstract

**Background.** Scientific congresses act as observatories of a professional community's priorities and methods. The abstracts submitted to a national oncology nursing congress form a real-world corpus through which research and practice trajectories can be examined empirically rather than impressionistically.
**Objective.** To identify and interpret the emerging topics within the abstracts included in the AIIAO 2026 Congress proceedings using lexicometric analysis followed by topic modelling, and to discuss their implications for the oncology nursing agenda.
**Methods.** Exploratory, corpus-based text-mining study. The English structured bodies of the 82 included abstracts were preprocessed (lowercasing; removal of punctuation, digits and

structural headings; lemmatization; moderate stopword control; n-gram detection). Lexicometric descriptives were computed, and Latent Dirichlet Allocation models were estimated for k = 4-7. The number of topics was selected by combining coherence with the CaoJuan2009, Arun2010 and Deveaud2014 criteria and interpretability, not by automatic optimisation alone.

**Results.** The corpus contained 21,347 running words and 3,568 unique word forms (type-token ratio 0.167; 44.6% hapax). A five-topic solution was selected: care pathways, procedural safety and quality improvement (35.4%); self-management, treatment adherence and nursing surveillance (14.6%); nursing research capacity and symptom-distress measurement (19.5%); professional roles, leadership and organizational/ethical development (17.1%); and palliative and supportive care, quality of life and continuity (13.4%). The latent topics cut across the author-assigned editorial clusters.

**Conclusions.** The topics suggest a maturing research community oriented towards safe, standardized and person-centred care, supported by advanced roles, outcome measurement and digital health. The findings describe the submitted corpus and are not representative of Italian oncology nursing as a whole.

**Keyword:** Oncology Nursing, Topic Modelling, Care Pathways, Nursing Leadership, Palliative Care, Digital Health, Nursing Research

## Introduction

Cancer remains one of the largest contributors to the global burden of disease, and the demand for skilled nursing care across the cancer trajectory continues to grow (Kocarnik et al., 2022). Within this context, oncology nursing has evolved from a predominantly task-oriented role into a research-engaged specialty with its own scientific priorities, advanced clinical roles, and policy ambitions (Rosenzweig et al., 2024). National congresses are a privileged vantage point on this evolution: the abstracts a professional community submits to its annual meeting represent, in aggregate, a snapshot of what its members are studying, implementing and prioritising at a given moment.

Reading such a corpus one abstract at a time is informative but inevitably selective, and narrative summaries of congress content tend to reflect the interests of whoever writes them. Automated text analysis offers a complementary, reproducible lens. Lexicometric analysis quantifies the vocabulary and phraseology of a corpus, while probabilistic topic modelling, most commonly Latent Dirichlet Allocation (LDA) (Blei et al., 2003), represents documents as mixtures of latent topics, each defined by a characteristic distribution of words. These techniques are increasingly applied to nursing texts, from clinical care reports (Danler et al., 2024) to the analysis of global research trends (Oh et al., 2024), precisely because they surface thematic structure that is difficult to perceive by manual reading alone.

The Italian Association of Oncology Nurses (AIIAO) 2026 Congress generated a substantial set of submitted abstracts spanning clinical innovation, specialist competencies, continuity of care, patient-reported outcomes, therapeutic education, digital health, and service organization. This corpus is an opportunity to characterise, with explicit and auditable methods, the themes that currently animate Italian oncology nursing. We treat the corpus as empirical material to map emerging topics, while remaining cautious about inferring the real-world prevalence of these phenomena in clinical practice.

Accordingly, the objective of this commentary is to identify and interpret the emerging topics within the abstracts included in the AIIAO 2026 Congress proceedings using lexicometric analysis followed by topic modelling analytics, and to

discuss their implications for the scientific agenda, specialist competencies, digital health, patient-reported outcomes and measures of experience, continuity of care, and the educational and policy priorities of oncology nursing and of AIIAO.

## Methods

### *Study design*

This is an exploratory, corpus-based text-mining (data-mining) study of congress abstracts. It is neither a systematic review nor a survey, and it makes no claim to statistical representativeness of Italian oncology nursing. The unit of analysis is the final abstract included in the AIIAO 2026 proceedings.

### *Corpus and unit of analysis*

The corpus was derived from the AIIAO 2026 proceedings and the associated REDCap submission export. Of 91 submitted records inspected, 85 were complete; four incomplete records were excluded as not included in the final abstract book, and five duplicate records were removed after pre-specified duplicate-group checks (groups 26/27, 35/36, 53/68, and 75/89/90), yielding 82 unique abstracts (identifiers A001–A082). Each abstract appears once, irrespective of whether it was present in both the manuscript and the export. The analysed text was the English structured abstract body, which was available for all 82 abstracts; titles and keywords were not included in the primary model to avoid the noise introduced by mixed Italian–English titles. The corpus was therefore linguistically homogeneous (English).

### *Preprocessing*

Each abstract body was lowercased; apostrophes, punctuation, and isolated digits were removed; and recurrent structural headings (introduction, background, methods, results, conclusions, discussion, objective, aim, purpose, keywords) were deleted as non-semantic noise. Tokens were lemmatized (WordNet), and English stopwords were removed. A moderate domain-specific control was applied for the topic model only: a small set of hyper-frequent, weakly discriminating terms (study, patient, oncology, nursing/nurse) was removed from the topic-modelling input while retained in the raw frequency counts, so that conceptually central terms were preserved in the descriptive lexicometry. Statistically detected bigrams and trigrams (for example, palliative care, quality of life, case manager) were retained. All preprocessing decisions were logged in an audit trail.

### *Lexicometric analysis*

Descriptive lexicometry quantified the size and richness of the corpus: the number of abstracts, total running words (tokens), unique word forms (types), hapax legomena (words occurring once), the type–token ratio (TTR), and abstract-length statistics. We then examined the most frequent content terms, the most frequent bigrams and trigrams, and discriminating terms identified through term frequency–inverse document frequency (TF-IDF). Together, these indicators describe vocabulary volume and diversity and provide a foundation for topic modelling by confirming that the corpus is sufficiently varied to reveal meaningful themes.

### *Topic modelling and selection of the number of topics*

Latent Dirichlet Allocation (LDA) (Blei et al., 2003) was used as an interpretable generative model consistent with a commentary. A document–term matrix was constructed from the preprocessed corpus, and models were estimated for k = 4, 5, 6 and 7 topics. The number of topics was not chosen by automatic optimisation alone. We combined topic coherence (Röder et al., 2015) with three established model-selection criteria—the density-based CaoJuan2009 criterion (minimised) (Cao et al., 2009), the Arun2010 symmetric Kullback–Leibler criterion (minimised) (Arun et al., 2010), and the Deveaud2014 information-divergence criterion (maximised)—together with the semantic interpretability of the resulting topics (Deveaud et al., 2014). The Griffiths2004 marginal-likelihood criterion is referenced as part of this family of metrics but was not computed in the present implementation (Griffiths & Steyvers, 2004); coherence was used as the interpretability-oriented indicator in its place, and this choice is stated transparently. Candidate solutions were presented with their metrics and top words before a final solution was agreed.

*Interpretive validation and topic labelling*

For the selected solution, each topic was characterised by its top words and bigrams, its prevalence (the proportion of abstracts assigned to it as the dominant topic), and its most representative abstracts (those with the highest topic probability). Interpretive labels were assigned by reading these representative abstracts alongside the top terms; the labels are interpretations of latent dimensions that may overlap and are not fixed categories. Each abstract was assigned to its dominant topic using document–topic probabilities, and a full assignment table (abstract identifier, title, dominant topic, maximum probability, and second topic) was retained as a supplementary audit output.

*Software and reproducibility*

Analyses were performed in Python version 3.12 for Windows using scikit-learn (TF-IDF), gensim (LDA, phrase detection, and coherence), and NLTK (lemmatization and stopwords). A fixed random seed was used for all models. The clean corpus, the analysis script, the lexicometric and topic-model outputs, the figures, and a process log are provided as supplementary materials to allow the analysis to be reproduced and audited.

## Results

*Corpus and lexicometric descriptives*

The corpus comprised 82 abstracts spanning the nine author-assigned editorial clusters of the proceedings. It contained 21,347 running words and 3,568 unique word forms, with a TTR of 0.167 and 1,591 hapax legomena (44.6% of all word forms), indicating a varied, specialised vocabulary. Abstracts had a mean length of 260 tokens (median 248; range 158–1,432). The most frequent content terms were care, patient, nurse, clinical, and study; the most frequent bigrams were palliative care, quality of life, care pathway, continuity of care, and case manager.

TF-IDF highlighted discriminating terms, including symptom, distress, pathway, leadership, organizational, palliative, and research. Table 1 summarises these descriptives, and Figure 2 (panels 2a and 2b) shows the most frequent terms and bigrams.

Table 1. Corpus and lexicometric descriptives.

| Indicator | Value |
|---|---|
| Abstracts analysed | 82 |
| Editorial clusters represented | 9 |
| Total tokens (running words) | 21,347 |
| Unique word forms (types) | 3,568 |
| Hapax legomena, n (%) | 1,591 (44.6%) |
| Type–token ratio | 0.167 |
| Mean abstract length (tokens) | 260.3 |
| Median abstract length (tokens) | 248 |
| Length range (tokens) | 158–1,432 |
| Most frequent terms | care; patient; nurse; clinical; study |
| Most frequent bigrams | palliative care; quality of life; care pathway; continuity of care; case manager |

**Note.** Lexicometric indicators are computed on cleaned surface word forms; the most frequent terms and bigrams are computed on lemmatized content tokens.

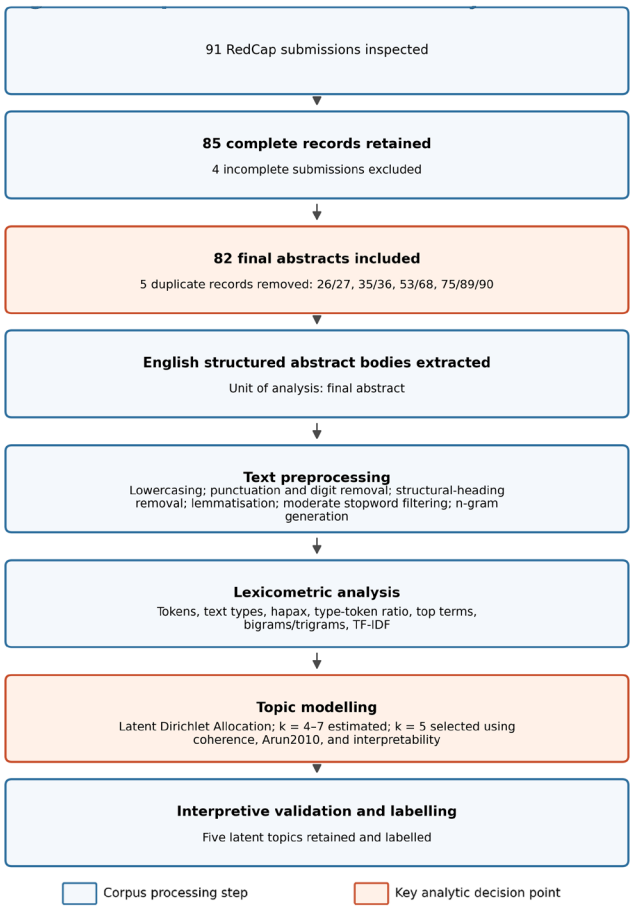


Figure 1. Corpus construction and analytic workflow

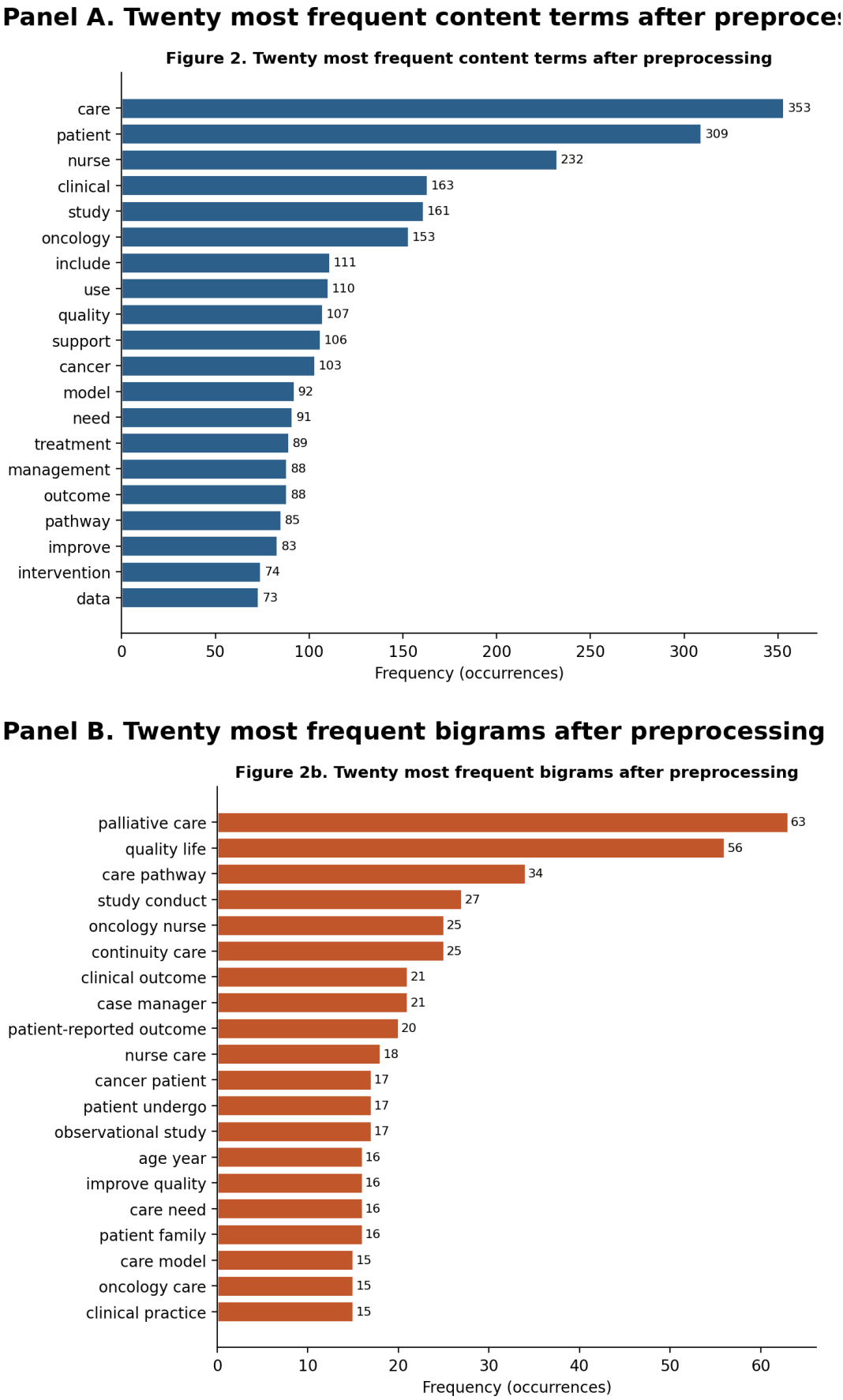


Figure 2. Lexicometric profile of the AIIAO 2026 abstract.

**Note.** Panel A shows the twenty most frequent content terms, while Panel B shows the twenty most frequent bigrams. Frequencies refer to occurrences in the preprocessed corpus and highlight the centrality of care, patients, nursing, oncology, quality of life, palliative care, care pathways, continuity of care, and patient-reported outcomes within the submitted abstracts.

*Selection of the number of topics*

Across the candidate solutions, the coherence-based and Arun2010 criteria favoured a five-topic model, whereas the CaoJuan2009 and Deveaud2014 criteria improved monotonically with more topics—a known tendency of these criteria to reward finer partitions. The seven-topic solution produced a very small topic (five abstracts) and lower coherence. Weighing the metrics against interpretability, a five-topic solution was selected as the main model (Table 2 reports the comparison).

Table 2. Corpus and lexicometric descriptives.

| k | Coherence c_v (↑) | CaoJuan2009 (↓) | Arun2010 (↓) | Deveaud2014 (↑) |
|---|---|---|---|---|
| 4 | 0.341 | 0.617 | 0.068 | 0.169 |
| 5 | 0.347 | 0.565 | 0.034 | 0.198 |
| 6 | 0.304 | 0.555 | 0.045 | 0.207 |
| 7 | 0.298 | 0.523 | 0.039 | 0.230 |

**Note.** The selected five-topic solution is highlighted. Arrows indicate the optimisation direction of each criterion.

*Five-topic solution: labels, prevalence and top words*

The five topics and their prevalence were: Topic 1, care pathways, procedural safety and quality improvement (29 abstracts, 35.4%); Topic 2, self-management, treatment adherence and nursing surveillance (12, 14.6%); Topic 3, nursing research capacity and symptom–distress measurement (16, 19.5%); Topic 4, professional roles, leadership and organizational/ethical development (14, 17.1%); and Topic 5, palliative and supportive care, quality of life and continuity (11, 13.4%). Figure 3 shows topic prevalence; Table 3 reports labels, top terms, representative abstracts, and interpretive meaning.

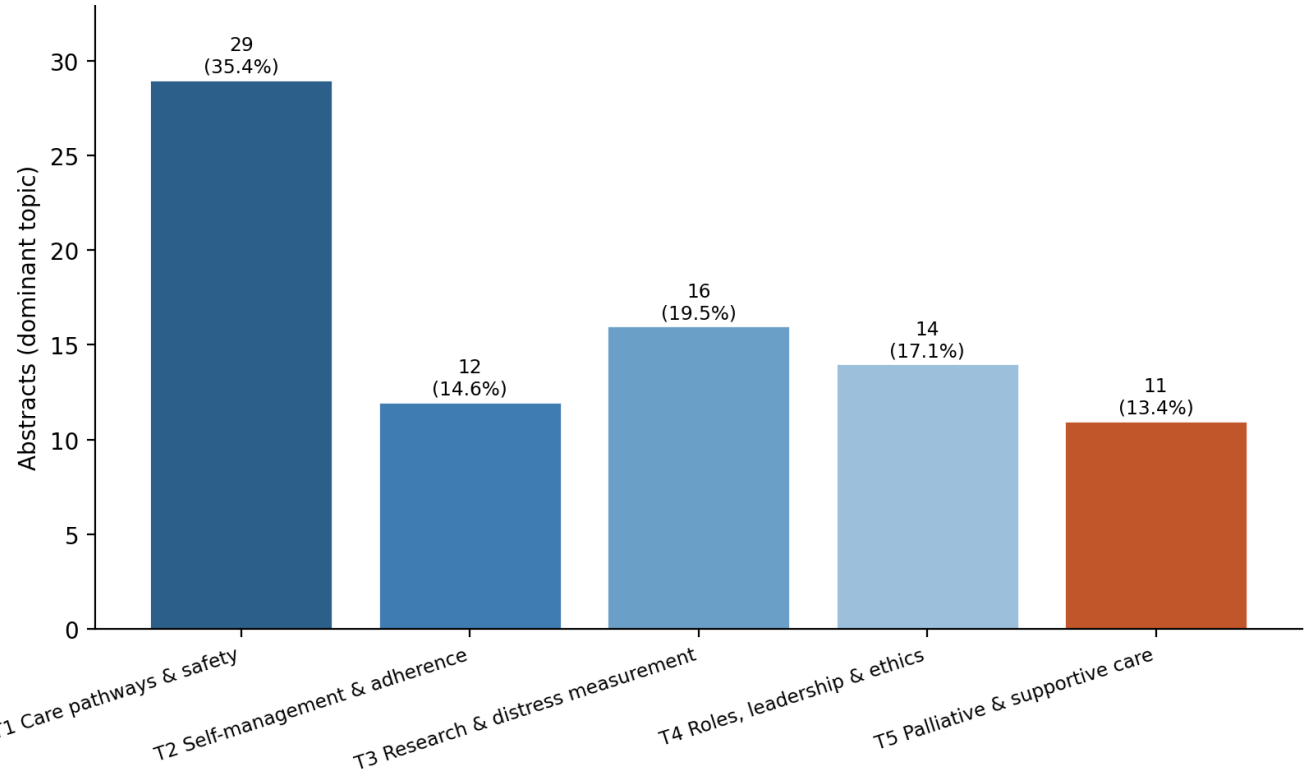


Figure 3. Topic prevalence (dominant-topic assignment, k = 5).

Table 3. Topic interpretation (five-topic solution).

| Topic (label) | Prevalence n (%) | Top terms | Representative abstracts and interpretive meaning |
|---|---|---|---|
| T1. Care pathways, procedural safety and quality improvement | 29 (35.4) | safety, improve, process, pathway, procedure, implementation, structure, tool, model | A006, A007, A019. Standardisation and safety of clinical processes, care-pathway design and quality-improvement initiatives. |
| T2. Self-management, treatment adherence and nursing surveillance | 12 (14.6) | management, surveillance, self-care, monitor, adherence, perceive, intervention | A001, A002, A012. Adherence to (oral) anticancer therapy, self-management support and ongoing nursing monitoring. |
| T3. Nursing research capacity and symptom–distress measurement | 16 (19.5) | research, symptom, distress, experience, network, assessment, protocol, questionnaire | A004, A008, A015. Research infrastructure and roles alongside instrument-based measurement of symptoms and distress. |
| T4. Professional roles, leadership and organizational/ethical development | 14 (17.1) | professional, leadership, ethical, role, value, organizational, knowledge, practice | A024, A042, A049. Advanced roles, leadership, educational needs and organizational/ethical dimensions of practice. |
| T5. Palliative and supportive care, quality of life and continuity | 11 (13.4) | treatment, palliative care, disease, pain, family, quality of life, score | A014, A022, A034. Palliative and supportive care, symptom and quality-of-life outcomes, and continuity across settings. |

**Note.** Topics are latent dimensions and may overlap; representative abstracts are those with the highest topic probability.

*Latent topics versus editorial clusters*

The latent topics did not simply reproduce the nine author-assigned editorial clusters. As Figure 4 shows, each topic drew abstracts from several clusters: for example, Topic 1 aggregated abstracts from all clusters, while Topic 4 concentrated abstracts originally assigned to organization/policy and to the Bologna congress stream. This divergence is itself informative—it indicates that the vocabulary authors actually use cuts across the thematic labels they select at submission, and it should be read as a feature of the analysis rather than an inconsistency.

## Discussion

Applying lexicometric analysis and topic modelling to the 82 abstracts of the AIIAO

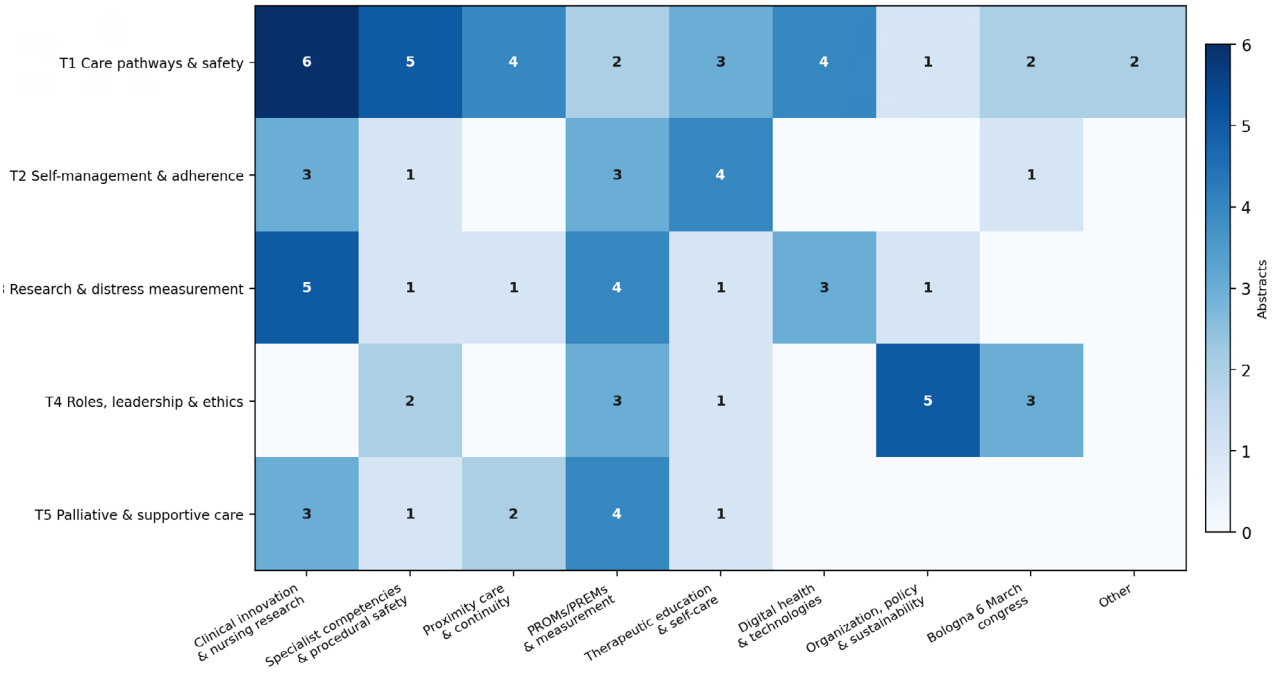


Figure 4. Latent topics (rows) versus author-assigned editorial clusters (columns).

2026 proceedings produced five interpretable topics: care pathways and procedural safety; self-management and adherence; research capacity and symptom–distress measurement; professional roles and leadership; and palliative and supportive care. The most prevalent topic concerned the design and safety of standardized care processes, and the recurrent bigrams, i.e., palliative care, quality of life, care pathway, continuity of care, case manager, reinforced a picture of a specialty preoccupied with organizing safe, coordinated, and person-centered cancer care.

Read as signals rather than measurements, these topics are consistent with a maturing research community. The prominence of research-capacity language and of instrument-based assessment (questionnaires, distress, symptom measurement) within Topic 3 suggests that methodological awareness and outcome measurement are becoming embedded in the work that members choose to present, echoing the formalised research priorities of oncology nursing internationally (Rosenzweig et al., 2024).

Specialist competencies, advanced roles, and research infrastructure emerge as a shared axis of development. Topic 4 foregrounds professional roles, leadership, and organizational and ethical values, and Topic 3 foregrounds research networks and capacity. This aligns with the international expansion and diversification of advanced practice nursing roles in cancer care (Dowling et al., 2024), and it implies that role definition, leadership development, and research infrastructure are perceived as preconditions, not by-products, of clinical innovation.

Patient-reported outcomes and experiences, self-care, and therapeutic education are a second axis. Topic 2 (adherence, self-management, surveillance) and the measurement vocabulary of Topic 3 reflect growing attention to what patients report and to how nurses monitor it. This resonates with evidence that systematic, nurse-supported monitoring of patient-reported outcomes can improve outcomes in metastatic cancer (Basch et al., 2022), and it positions patient-reported outcome and experience measures (PROMs/PREMs), self-management support and therapeutic education as practical levers for continuity of care.

Palliative and supportive care and continuity (Topic 5) bridge clinical and organizational concerns, with case management and continuity recurring across topics. Nurse-led primary palliative care interventions have demonstrated value in advanced cancer (Schenker et al., 2021), and the corpus suggests that Italian oncology nurses are actively developing such models, including territorial and hospital–community integration.

Digital health and emerging technologies appear as an opportunity threaded through several topics rather than as a self-contained theme. The breadth of digital health and telehealth applications in cancer care is well documented (Shaffer et al., 2023), and telehealth-delivered models can match in-person care for some palliative endpoints (Greer et al., 2024). The relatively diffuse presence of digital language in the corpus may signal both genuine uptake and a risk of an organizational and competency divide if technological adoption outpaces role design, training, and infrastructure.

For AIIAO, these results offer an evidence-informed basis for agenda-setting. They suggest concrete directions: consolidating methodological and research-capacity training (continuing education aligned with measurement and study design); formalising advanced and specialist roles and the competencies that underpin safe care pathways; embedding PROMs/PREMs and self-management support into models of continuity; and developing a considered position on digital health that protects equity and competency. Because the latent topics cut across the editorial clusters, AIIAO might also reconsider how it structures abstract categories so that they better reflect the vocabulary members actually use.

Several limitations warrant discussion. The corpus reflects what was submitted to and included in a congress and is shaped by selection, language, contribution type, and participants' interests; the topics describe this corpus and do not establish the real-world prevalence of these phenomena in Italian oncology nursing. Topics are latent, overlapping dimensions, and dominant-topic assignment simplifies abstracts that often span several themes. Results from text-mining are sensitive to preprocessing and to the choice of k; we have therefore documented every decision and provided the full pipeline for audit. Therefore, the main limitations are the non-probabilistic nature of the corpus, heterogeneous abstract quality and length, residual linguistic noise from a community writing in both Italian and English, the sensitivity of results to

analytic choices, and the exploratory status of the topics, which should not be interpreted as a representative map of Italian oncology nursing.

Future work could extend this approach longitudinally, comparing successive AIIAO congresses to track how topics rise and fall, triangulating topic models with manual thematic coding, and linking abstract topics to subsequent full publications to assess which congress themes translate into sustained research programs.

## Conclusions

A lexicometric and topic-modelling analysis of the AIIAO 2026 Congress abstracts identified five emerging topics centred on safe and standardized care pathways, self-management and adherence, research capacity and outcome measurement, professional roles and leadership, and palliative and supportive care. Interpreted prudently, these topics can help orient AIIAO's scientific agenda, continuing education, competency development, and policy positioning, while digital health is best treated as a cross-cutting opportunity to be managed equitably. The findings characterise the submitted corpus and are offered as a reproducible observatory of professional priorities rather than as a representative account of the field.

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## Abstract

# The Pivotal Role of the Clinical Research Nurse in Phase I Oncology Clinical Trials: Managing Complexity, Safety and Coordination

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Winner of the Best Abstract Award - ***1st Place***

**Introduction.** Phase I oncology clinical trials primarily aim to define the safety profile, tolerability and optimal dosing of investigational therapies. The introduction of targeted agents and immunotherapies has markedly increased trial complexity, introducing novel challenges in toxicity assessment, clinical surveillance, and protocol execution. Accumulating evidence demonstrates significant discordance between clinician-reported adverse events and patient-reported outcomes (PROs), thereby exposing inherent limitations of conventional safety evaluation frameworks and emphasizing the need for more sensitive, multidimensional, and patient-centered assessment methodologies. This review aims to critically appraise and systematically synthesize contemporary evidence on the increasing complexity of Phase I oncology trials, with particular emphasis on the role of the Clinical Research Nurse (CRN) in ensuring patient safety, data integrity, and protocol adherence. Additionally, this review aims to examine the CRN's contribution to multidisciplinary coordination, the early detection and management of adverse events, and the identification of priority areas for nursing research to support the implementation and advancement of early-phase clinical practice.

**Methods.** A scoping review was conducted in accordance with the Arksey and O'Malley methodological framework and reported following PRISMA-ScR guidelines. A comprehensive search of international databases was performed for studies published between 2015 and April 2026, using keywords related to oncology, Phase I clinical trials, and clinical research nursing. Twelve English-language studies, including observational, qualitative, and review designs, were selected based on predefined inclusion and exclusion criteria. Studies lacking full-text availability were excluded.

**Results.** Phase I oncology trials are characterized by substantial operational complexity, evolving

endpoints, and stringent regulatory requirements. The evidence consistently demonstrates a marked underestimation of symptomatic adverse events by clinicians when compared with patient-reported outcomes (PROs), with some studies reporting discrepancies of up to an order of magnitude. Patient participation appears to be influenced by a range of psychosocial determinants, including expectations of therapeutic benefit, individual coping mechanisms, and trust in the healthcare team. Within this context, the CRN emerges as a pivotal figure in safety surveillance, early identification and management of adverse events, protocol compliance, and the maintenance of data quality. Moreover, CRNs play a pivotal role in patient education, the informed consent process, and interdisciplinary coordination, operating within a highly demanding and multidimensional workload environment.

**Discussion.** Clinical Research Nurses are integral to ensuring patient safety, methodological rigor, and protocol adherence in Phase I oncology trials. Systematic integration of PROs and the formal recognition of advanced CRN competencies have the potential to enhance the accuracy of toxicity assessment, strengthen patient-centered care, and improve overall research quality in early-phase oncology. Future research should focus on standardizing the CRN role across clinical research networks and on structured incorporation of PRO-based monitoring into early-phase trial design.

**Keywords**: Phase I Clinical Trials, Research Nurse, Patient Safety, Adverse Events, Clinical Trial Complexity, Care Coordination



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Monitoring Distress and the Effectiveness of Support and Relief Interventions in Hospitalized Patients: A Retrospective Study in the Orthopedic Oncology Unit of the Istituto Ortopedico Rizzoli

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**Citation:** Iacovone, F. (2026). Monitoring distress and the effectiveness of support and relief interventions in hospitalized patients: A retrospective study in the orthopedic oncology unit of the Istituto Ortopedico Rizzoli. *International Journal of Health Supplements*, 1(Suppl. 2), 128–129. https://doi.org/10.82051/ijhs-2026-Suppl2

Winner of the Best Abstract Award - ***2nd Place***

**Introduction.** Distress is a negative experience associated with a cancer diagnosis and can impair the quality of life for patients and their caregivers. Since October 2023, the clinic has systematically assessed distress using the "Distress Thermometer" to initiate support interventions. The aim of this study was to assess distress levels at admission and discharge, analyze changes in distress categories, and evaluate the impact of volunteer activities on patient well-being.

**Methods.** A retrospective observational study was conducted on 277 patients. Each patient was administered the Distress Thermometer at admission and discharge, along with a satisfaction questionnaire regarding the support activities received.

**Results.** On average, distress levels decreased from 4.8 to 4.1 ($p < 0.001$). The analysis showed that 72.8% of patients experienced either improvement or stable distress levels. The causes of distress at admission included pain (44.9%) and anxiety (55.9%), with significant improvements in anxiety at follow-up.

**Discussion.** Despite the slight improvement in distress, volunteer visits did not significantly impact the perceived distress scores. Evaluating the causes of distress provides insights for further improvements in pain and anxiety management. The study highlights the importance of professional and human support in the ward, as well as the value of volunteer activities. Healthcare staff play a crucial role in ensuring a positive perception of the hospitalization experience.

**Keywords:** Distress, Oncology Patient, Volunteer Support



**Funding:** This research received no external funding. **Conflict of Interest:** The author declares no conflict of interest.

## Abstract

# OncoSkin Defence: Patient-Reported Outcomes and Experiences of Radiation Dermatitis in an Oncological Population. A Mixed-Methods Study Protocol

**Alessia Campoli[1,2], Giulia Manzon[1,2], Chiara Giammaria[1,2], Simona Sgromo[1,2], Ilaria Farina[1], Aurora De Leo[1], Alessandro Spano[1,2], Emanuele Di Simone[3], Fabrizio Petrone[1], Nicolò Panattoni[1]**

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**Citation:** Campoli, A., Manzon, G., Giammaria, C., Sgromo, S., Farina, I., De Leo, A., Spano, A., Di Simone, E., Petrone, F., & Panattoni, N. (2026). OncoSkin Defence: Patient-reported outcomes and experiences of radiation dermatitis in an oncological population: A mixed-methods study protocol. *International Journal of Health Supplements,* 1(Suppl. 2), 130–131. https://doi.org/10.82051/ijhs-2026-Suppl2

Winner of the Best Abstract Award - ***3rd Place***

**Introduction.** Radiation dermatitis affects up to 95% of patients undergoing radiotherapy, significantly impacting quality of life through symptoms such as pain, pruritus, sleep disturbance, and social discomfort. The tool usually used to assess these conditions focuses on observable clinical signs and fails to capture patient-reported outcomes and experiences. The role of patient-reported outcome measures (PROMs) has become increasingly prominent in contemporary cancer care. Their integration into oncology practice has been shown to enhance QoL and, in some cases, survival effects likely mediated by improved symptom monitoring, early intervention, and greater tolerance to treatment regimens. This study aims to address this gap by exploring and characterising the lived experiences and patient-reported outcomes of individuals undergoing radiotherapy who develop radiation dermatitis (RD).

**Methods.** A convergent mixed-methods study will be performed according to Creswell's framework. The qualitative component will explore patients' lived experiences, the quantitative component will assess outcomes using validated PROMs (Skindex-16, Pittsburgh Sleep Quality Index, Body Image Scale, Patient Activation Measure-13). Partecipants will be adult oncological patients (≥ 18 years), undergo radiotherapy, diagnosed with RD, classified according to CTCAE v5.0, able and willing to give informed consent, and able to read and speak Italian. Quantitative and qualitative data will be analysed independently, accorded equal weighting, and later integrated afterward.

**Results.** This study would fill a significant gap in the existing literature by being the first to explore the lived experiences of patients with radiation dermatitis and to assess their patient-reported outcomes, stratifying the findings according to cancer type. The study is expected to generate a comprehensive understanding of both the clinical and experiential dimensions of radiation-induced skin toxicity in oncology.

**Discussion.** The integration of findings will inform the development of the OncoSkin Defence Model, a patient-centred and evidence-informed framework aimed at enhancing nursing assessment, patient education, and symptom management in patients undergoing radiotherapy.

**Keywords**: Patient-Reported Experience, Patient-Reported Outcomes, Radiation Dermatitis, Oncological Population



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

# Abstract

# Nursing Case Management in Oncology: Preliminary Effects on Quality of Life, Distress, and Continuity of Care

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Winner of the Frendo Moira Maria Rita Award - ***1st Place***

**Introduction.** In patients with cancer undergoing active treatment, the care experience is influenced by treatment-related adverse effects, emotional distress, relational vulnerability, and the risk of fragmented care. Nursing case management may provide a useful organizational model for integrating monitoring, therapeutic education, personalized support, and continuity of care. The aim of this study was to evaluate the impact of a structured nursing case management pathway on perceived quality of life, distress, symptom burden, unplanned healthcare visits, and continuity of care among patients with cancer undergoing active treatment.

**Methods.** A prospective pre-post pilot study was conducted in a medical oncology/day hospital setting. The sample comprised 30 adult patients receiving active anticancer treatment. The intervention included a multidimensional nursing assessment, early identification of care needs, personalized education, scheduled monitoring between treatment cycles, and timely activation of the multidisciplinary network when clinical, psychological, or social concerns were identified. Three questionnaires were administered at baseline, between treatment cycles, and at the end of the pathway to assess continuity of care, support needs, symptoms, emerging concerns, care experience, and satisfaction.

**Results.** The sample included 30 patients with a mean age of 58.9 ± 12.1 years; 70.0% were female and 53.3% had a caregiver. Mean perceived quality of life increased from 51.7 ± 8.5 at baseline to 62.6 ± 10.4 at the end of the pathway, while distress decreased from 6.4 ± 1.7 to 4.5 ± 2.1 and symptom burden from 49.7 ± 13.9 to 40.2 ± 14.4. At baseline, 83.3% of patients requested scheduled nursing contact and 53.3% reported difficulty managing symptoms at home. During treatment cycles, 66.7% requested nurse follow-up. At the end of the pathway, 96.7% reported improved overall care experience and early symptom recognition, while 93.3% reported greater continuity between treatments.

**Discussion.** Nursing case management appears to be a promising model for supporting patients with cancer undergoing active treatment by enhancing continuity of care, promoting early symptom management, and strengthening the therapeutic relationship. The findings suggest favorable trends in quality of life, distress, symptom burden, and patient-reported care experience, supporting further evaluation of structured nursing case management pathways in oncology practice.

**Keywords:** Nursing Case Management, Oncology, Continuity Of Care, Quality Of Life, Distress



**Funding:** This research received no external funding. **Conflict of Interest:** The author declares no conflict of interest.

## Abstract

# Virtual Reality (VR) as a Nursing-Led Intervention in Oncology: An Observational Study on Feasibility, Acceptability, and Patient-Reported Experience (PRE) during Chemotherapy

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Winner of the Frendo Moira Maria Rita Award - *2nd Place &* Winner of the Early Bird Abstract Award

**Introduction.** Chemotherapy treatment may be associated with increased emotional stress and procedural anxiety, potentially affecting patients' psychological well-being and overall care experience. In this context, Virtual Reality (VR) represents an innovative non-pharmacological strategy based on sensory immersion and cognitive engagement, aimed at promoting comfort, relaxation, and well-being during treatment. Although interest in immersive technologies is steadily growing, the integration of VR into nursing-led oncology care models is still in the early stages of consolidation within European clinical practice. To evaluate the operational feasibility, clinical acceptability, and perceived benefit of VR use during chemotherapy infusion, with particular focus on psychological well-being and patient care experience.

**Methods.** A monocentric descriptive observational study was conducted involving 25 oncology patients undergoing infusion treatment. The intervention consisted of immersive VR sessions

featuring naturalistic environments and interactive mindfulness content during chemotherapy administration. Data were collected through Likert-scale questionnaires (1–5) assessing perceived immersion, engagement capacity, technological usability, satisfaction, and willingness to reuse the intervention. Data were analyzed using descriptive statistics.

**Results.** Most participants were VR-naive (72%). Improved perceived relaxation (score ≥4) was reported by 64% of patients, while 76% described VR as highly effective in enhancing experiential engagement during treatment. A subjective reduction in treatment-related stress was reported by 68% of the sample. The intervention demonstrated high technological usability (88%) and overall satisfaction (84%). Furthermore, 92% of participants would recommend integrating VR into the oncology care pathway. No cybersickness-related adverse events were observed.

**Discussion.** VR appears to be a safe, well-tolerated, and highly acceptable nursing intervention in the infusion oncology setting. The integration of immersive non-pharmacological technologies may contribute to enhancing the care experience and supporting the humanization of care, while strengthening the nursing role in promoting patient well-being. Randomized controlled trials (RCTs) and multicenter studies will be necessary to further investigate the impact of VR on structured clinical outcomes and larger patient populations.

**Keywords**: Virtual Reality, Cancer, Chemotherapy-Induced, Oncology Nursing, Patient-Reported Experience



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Optimization of the ERAS Pathway in Robot-Assisted Oesophagectomy (RAMIE) in a Comprehensive Cancer Centre: From Compliance Analysis to Revision of the Care Component of the PSDTA

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**Citation:** Brero, A., Grangetto, B., Pellegrino, L., Salomone, S., Robella, M., Borghi, F., Daniele, N., & Bassi, C. (2026). Optimization of the ERAS pathway in robot-assisted oesophagectomy (RAMIE) in a Comprehensive Cancer Centre: From compliance analysis to revision of the care component of the PSDTA. *International Journal of Health Supplements*, 1(Suppl. 2), 136–137. https://doi.org/10.82051/ijhs-2026-Suppl2

Winner of the Early Bird Abstract Award

**Introduction**. ERAS protocols are evidence-based standards in oncological surgery, but their application in robot-assisted oesophagectomy (RAMIE) is complex. In a Comprehensive Cancer Centre, this approach enables comprehensive patient care, ensuring continuity between the surgical and oncological pathways. As Case Manager and ward nurses are crucial for continuity of care, the aim of this study was to assess adherence to perioperative ERAS items in order to redefine the care component (A) of the PSDTA and maximize compliance.

**Methods.** Data from 20 patients undergoing RAMIE within an ERAS pathway in 2024 were analyzed. Adherence to 35 ERAS items was assessed and stratified by type (non-specific, operative, and specific) and timing (pre-, intra-, and post-operative). The care component (A) of the PSDTA was subsequently revised on the basis of the data analysis and available literature, including PubMed and ERAS Society guidelines. The revised pathway was validated by a multidisciplinary team comprising surgeons, nurses, dietitians, physiotherapists, and pain therapists, with particular attention to improving compliance during the post-operative phase.

**Results.** Overall compliance with ERAS items was 77%. According to item type, compliance was 87%

for non-specific procedures, 79% for operative procedures, and 73% for specific procedures. According to timing, compliance reached 97% in the intra-operative phase and 79% in the pre-operative phase. The post-operative phase emerged as the most critical, with a compliance rate of 55%, mainly due to delays in early nasogastric tube removal and oral refeeding, often associated with delayed gastric emptying. Early enteral nutrition via jejunostomy was found to be feasible. These findings guided revision of the care component of the PSDTA, with a specific focus on post-operative items.

**Discussion.** Despite good overall adherence, the post-operative phase of the RAMIE pathway remains the area of greatest clinical complexity. Integrating scientific evidence, real-world clinical data, and multidisciplinary expertise enabled the care component of the PSDTA to be revised to improve its feasibility in clinical practice. A flexible approach that adapts ERAS protocols to individual patient needs is essential. The Case Manager nurse remains central to care coordination, supported by ward nurses in practical implementation and early monitoring. A well-structured PSDTA may strengthen quality of care, multidisciplinary integration, and outcomes throughout the oncological surgical pathway.

**Keywords**: ERAS, Robot-Assisted Oesophagectomy, Oncology Nursing



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Hospital–Community Integration: The Territorial Oncology Center of Local Health Authority 04 of Teramo

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Winner of the Early Bird Abstract Award

**Introduction**. Proximity-based care in oncology pathways represents an innovative model capable of improving accessibility, personalization, and humanization of care. Within this framework, the Territorial Oncology Center of Teramo has been established as a patient-centered facility designed to be welcoming, barrier-free, and focused on patient well-being. The center provides multidisciplinary services, ensuring access to oral and subcutaneous therapies and continuity between hospital and community care through a mobile unit-based organizational model, with outpatient clinics dedicated to specialist consultations and integrated services. The aim of this study was to evaluate the impact of this organizational model on quality of life, financial toxicity, service organization, and healthcare costs.

**Methods.** Data were collected from PROFFIT7 questionnaires, hospital information systems, and electronic medical records. Indicators included the number of accesses, services delivered, patients managed, quality of life, and costs. The study population comprised patients with HER2-positive breast cancer in early and advanced stages, luminal-like patients receiving adjuvant oral therapies, individuals in the diagnostic phase with potential inclusion in clinical care pathways (PDTA), and outpatient referrals through the centralized booking system (CUP).

**Results.** High levels of patient satisfaction were observed in both oncology and radiotherapy settings, particularly regarding staff availability and service accessibility. However, significant financial toxicity persisted, mainly related to transportation and out-of-pocket expenses. Hospital–community integration improved organizational efficiency: despite an increase in delivered services, the average

cost decreased by 43%, alongside an optimization of care settings.

**Discussion.** The model proved to be effective and sustainable, addressing the needs of a growing oncology population characterized by an increasing number of long-term survivors. The decentralization of low- to medium-intensity care activities enhances efficiency, reduces hospital overcrowding, and improves patients' psychosocial well-being. The role of the nurse is pivotal as educator, case manager, and facilitator of care continuity. Overall, this model confirms the value of an integrated, proximity-based approach capable of combining quality of care with the sustainability of the National Health Service.

**Keywords**: Decentralization Of Care, Hospital–Community Integration, Financial Toxicity



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Prevalence of Treatment-Related Adverse Events in Patients with Cutaneous Melanoma Treated with BRAF/MEK Inhibitors: A Systematic Review and Meta-Analysis

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Winner of the Early Bird Abstract Award

**Introduction.** Cutaneous melanoma (CM) is an aggressive malignancy whose management has been significantly improved by the introduction of targeted therapies, particularly BRAF and MEK inhibitors. However, these treatments are associated with a wide spectrum of treatment-related adverse events (TRAEs) that may affect treatment adherence, clinical outcomes, and quality of life. The aim of this study was to systematically review the safety profile of currently approved BRAF and MEK inhibitors in adults with CM and to estimate the pooled prevalence of TRAEs.

**Methods.** A systematic search of six databases was conducted for studies published from 2009 onward, including clinical trials and case reports evaluating BRAF and MEK inhibitors in adults with CM. TRAE frequencies reported in primary studies were aggregated using the Metaprop command in Stata 17, which calculates pooled prevalence with 95% confidence intervals (CIs) using the Freeman-Tukey double arcsine transformation within random-effects models. Methodological quality was assessed using the RoB 2 tool for randomized controlled trials (RCTs) and the ROBINS-I tool for non-

randomized studies.

**Results.** A total of 12 RCTs, 13 prospective cohort studies, and 10 case reports were included. Meta-analysis was feasible for two treatment regimens: vemurafenib 960 mg monotherapy and dabrafenib 150 mg twice daily plus trametinib 1–2 mg daily. During vemurafenib therapy, the most frequent TRAEs were musculoskeletal and connective tissue disorders (24%, 95% CI: 6–41%, $p = 0.01$), with arthralgia being the most prevalent symptom (44%, 95% CI: 29–59%, $p < 0.001$), followed by rash (39%, 95% CI: 22–56%, $p < 0.001$). For the dabrafenib plus trametinib regimen, the most common TRAEs were constitutional toxicities classified as general disorders and administration-site conditions (25%, 95% CI: 14–37%, $p < 0.001$), with fatigue (47%, 95% CI: 38–56%, $p < 0.001$) and pyrexia (40%, 95% CI: 26–54%, $p < 0.001$) being the most frequently reported symptoms. Squamous cell carcinoma and keratoacanthoma were among the most frequent grade ≥3 cutaneous adverse events associated with vemurafenib.

**Discussion.** BRAF and MEK inhibitor therapies show distinct toxicity profiles that should be carefully considered when developing personalized treatment strategies for patients with CM. Understanding the prevalence and patterns of TRAEs may support risk-stratified clinical decision-making and improve healthcare resource allocation in melanoma care. Further large-scale studies are needed to confirm these findings.

**Keywords**: Cutaneous Melanoma, BRAF/MEK Inhibitors, Treatment-Related Adverse Events



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Psychometric Validation of the Italian Version of the Malignant Wound Assessment Tool – Clinical (MWAT-C) in Oncological Skin Lesions

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Winner of the Early Bird Abstract Award

**Introduction.** Malignant fungating wounds are a frequent complication in patients with advanced cancer, with an estimated incidence ranging from 5% to 10%. Their management is complex because of their considerable physical, psychological, and social impact. The Malignant Wound Assessment Tool – Clinical version (MWAT-C) is one of the few instruments available in the literature for the multidimensional assessment of these lesions, and an Italian-language version has recently been developed. The aim of this study was to assess the inter-rater reliability, internal consistency, and user satisfaction of the Italian version of the MWAT-C (MWAT-C IT).

**Methods.** An observational validation study was conducted through simultaneous administration of the scale by two independent assessors. A total of 220 observations were collected for each item from

patients enrolled in the study. Data were analyzed to determine inter-rater reliability and internal consistency. User satisfaction was assessed using the User Experience Questionnaire.

**Results.** Inter-rater reliability was high, with 99.3% agreement across 6,272 items analyzed. Users provided an overall positive assessment, highlighting the usefulness and practicality of the instrument for the evaluation of oncological wounds.

**Discussion.** The MWAT-C IT proved to be a reliable instrument that was well accepted by healthcare professionals and useful for the standardized and multidimensional assessment of oncological wounds. Its application may support clinical decision-making and improve the quality of care.

**Keywords**: Malignant Fungating Wounds, Wound Assessment, MWAT-C



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Nursing Monitoring of Toxicities Related to CAR-T Therapy: A Qualitative Phenomenological Study

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Winner of the Early Bird Abstract Award

**Introduction.** Chimeric Antigen Receptor T-cell (CAR-T) therapy represents a major innovation in the immunotherapy of refractory or relapsed hematologic malignancies. However, it is associated with potentially severe toxicities that require intensive clinical monitoring. In this context, nursing surveillance and monitoring are crucial for the early detection of complications and clinical risk management. Despite the growing use of CAR-T therapy, the available literature provides limited evidence regarding nurses' experiential perspectives in this field. The aim of this study was to explore the experiences of nurses involved in the surveillance and monitoring of toxicities associated with CAR-T therapy in patients with hematologic malignancies.

**Methods.** A single-center phenomenological study was conducted in Italy. Participants were recruited through purposive sampling until data saturation was reached. Semi-structured interviews were conducted with ten nurses involved in the care of patients undergoing CAR-T therapy. Interviews were audio-recorded, transcribed, and analysed by two independent researchers using content analysis following Cohen's methodology.

**Results.** Five main themes emerged: I) approach to the novelty, II) evaluation of monitoring tools, III) organizational challenges related to surveillance, IV) perception of professional identity and

role, and V) the nurse-patient relationship. Participants expressed different opinions regarding the introduction of the therapy, ranging from apprehension to curiosity and enthusiasm. Assessment tools were considered helpful for the early detection of complications, although participants highlighted the need for more comprehensive training. One of the main perceived organizational challenges concerned the management of complications during night shifts. Participants also emphasized awareness of nursing competencies and roles within the multidisciplinary team and the importance of a nurse-patient relationship based on effective communication.

**Discussion and Conclusions.** This study provided a comprehensive understanding of nurses' experiences in the monitoring and surveillance of patients undergoing CAR-T therapy, highlighting the strategic role of nurses in this context. Educational and organizational interventions are needed to improve quality standards of care in CAR-T therapy.

**Keywords**: Chimeric Antigen Receptors, Hematologic Malignancies, Nurses



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## Abstract

# Cancer-Related Fatigue and Oncology Communication: Development and Evaluation of a Multimodal Educational Tool

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Winner of the Early Bird Abstract Award

**Introduction**. Communication is a key component of oncology care, yet it is often challenged by patients' clinical and emotional vulnerability. Although affecting up to 80% of oncology patients, cancer-related fatigue (CRF) remains a disabling symptom that is frequently underestimated and inadequately managed. Informational gaps persist, limiting patients' awareness and their ability to self-manage this condition. The aim of this study was to develop and evaluate the effectiveness of a multimodal educational tool, consisting of an informational brochure integrated with a QR code-linked website, to improve knowledge and management of CRF in oncology patients.

**Methods.** A descriptive observational study was conducted to develop and evaluate an educational intervention. The brochure, designed based on scientific evidence, was administered to a sample of oncology patients. Anonymous evaluation was performed using a structured questionnaire based on the validated Patient Educational Materials Assessment Tool (PEMAT). Understandability, perceived usefulness, promotion of self-management behaviors, and overall satisfaction using a 5-point Likert scale were analyzed using descriptive statistics.

**Results.** A total of 163 questionnaires were collected. Overall, 78% of participants rated the brochure as "very understandable," while 74% reported increased knowledge of CRF and its management strategies. A high level of behavioral intention emerged, with 72% of participants expressing maximum willingness to adopt the recommended strategies. Overall satisfaction was high, and 96% of participants would recommend the tool to other patients. Findings indicated a positive impact on patient awareness and behavioral intention.

**Discussion.** The intervention proved effective in reducing informational gaps and supporting both understanding and self-management of CRF, reinforcing the role of patient education and patient-provider communication. The integration of printed and digital resources represents an accessible, scalable, and easily replicable approach in clinical practice. Despite limitations related to the descriptive design and the lack of objective outcome measures, the findings suggest a potential impact in promoting patient empowerment and improving quality of care.

**Keywords:** Cancer-Related Fatigue, Therapeutic Education, Oncology Communication



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Comparative Effects of Gut Microbiota Modifiers (Prebiotics, Probiotics, and Synbiotics) on Gastrointestinal Disorders in Adults with Colorectal Cancer: A Systematic Review with Exploratory Network Meta-Analysis

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Winner of the Early Bird Abstract Award

**Introduction.** Gastrointestinal (GI) disorders are prevalent consequences in patients with colorectal cancer (CRC) undergoing chemotherapy and are frequently associated with changes in gut microbiota composition, considerably affecting quality of life. Available evidence suggests that microbiota modifiers, including probiotics, prebiotics, and synbiotics, may alleviate these alterations. However, the comparative effectiveness of different formulations in reducing GI symptoms remains unclear. The aim of this systematic review with network meta-analysis was to compare the effects of different microbiota-modifying formulations on GI outcomes in patients with CRC.

**Methods.** A systematic review (CRD42025638296) with pairwise meta-analysis and exploratory network meta-analysis was conducted, including randomized controlled trials (RCTs) published up to

September 2025 and identified through six databases. Odds ratios (ORs) and 95% confidence intervals (CIs) were used as efficacy measures in pairwise meta-analyses. The network meta-analysis compared four interventions: multistrain probiotics, placebo, probiotics combined with prebiotics, and no intervention or standard care. The Surface Under the Cumulative Ranking (SUCRA) method was used to rank the effectiveness of the interventions for the diarrhoea outcome.

**Results.** Twelve RCTs involving 1,009 participants were included. Multistrain probiotics significantly reduced nausea and vomiting (OR = 0.30, 95% CI: 0.09–0.99, p = 0.05) and diarrhoea (OR = 0.48, 95% CI: 0.26–0.87, p = 0.02). No significant effect was observed for abdominal distension and bloating (OR = 0.52, 95% CI: 0.22–1.20, p = 0.13). The combination of probiotics and prebiotics did not significantly reduce the incidence of diarrhoea (OR = 0.36, 95% CI: 0.08–1.66, p = 0.19). Multistrain probiotics used as a standalone intervention appeared to be the most effective formulation for reducing diarrhoea, with a SUCRA value of 83.0%.

**Discussion.** Multistrain probiotics reduce the incidence of diarrhoea, nausea, and vomiting among patients with CRC undergoing chemotherapy and appear to be the most effective formulation for reducing diarrhoea when used alone. Further studies with larger sample sizes are needed to corroborate these findings. Nurses have a central role in the early identification of patients at risk and in facilitating timely nutritional interventions alongside pharmacological therapies.

**Keywords**: Colorectal Cancer, Probiotics, Gastrointestinal Disorders



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Strategies for Managing Cancer-Related Cognitive Impairment (CRCI) in Childhood Cancer Survivors: A Systematic Review with Meta-Analysis

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Winner of the Early Bird Abstract Award

**Introduction.** Advances in cancer treatment have reduced cancer mortality by 70% in children, leading to a growing population of childhood cancer survivors (CCSs). This population experiences a premature onset of ageing-related morbidities, including cancer-related cognitive impairment (CRCI), attributable to epigenetic age acceleration (EAA). The National Cancer Institute (NCI) has highlighted the importance of early non-pharmacological strategies; however, current evidence regarding their efficacy remains limited. The aim of this study was to systematically map non-pharmacological strategies for managing neurocognitive impairment in childhood cancer survivors and assess their efficacy by including randomized controlled trials (RCTs).

**Methods.** This systematic review with meta-analysis (PROSPERO: CRD420251008299) followed Cochrane guidelines for systematic reviews of interventions. Six databases were searched from inception to September 2025. Two reviewers independently screened the studies, extracted data, and assessed the risk of bias using the RoB 2 tool.

**Results.** Thirteen publications representing 11 studies were included, among which two were quasi-randomized studies and six were pilot and feasibility studies. Participants were aged 4 to 17 years and included survivors of brain solid tumors and hematological malignancies. The identified strategies included computerized and non-computerized cognitive training interventions, interactive analog tools, traditional interventions aimed at developing academic and mathematical skills, and physical activity programs. Computerized cognitive training using the Cogmed® platform showed

statistically significant post-intervention improvements across several cognitive domains, including working memory, attention, visuospatial memory, and executive functions, as well as academic skills such as reading and mathematics. These benefits tended to persist over time, with the exception of mathematical skills.

**Discussion.** The findings suggest improvements in intellectual functioning and cognitive abilities following structured cognitive training programs. Integrating these interventions into clinical pathways may contribute to improving the social integration and long-term outcomes of childhood cancer survivors. Further randomized controlled trials are needed to enable rigorous quantitative synthesis of the evidence and to evaluate interventions tailored to specific age groups.

**Keywords**: Cancer-Related Cognitive Impairment, Childhood Cancer Survivors, Cognitive Training



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# The Integrated Palliative Care Approach in a Curative Setting on Pain Management in Patients with Metastatic Breast Cancer: A Time-to-Event Analysis

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Winner of the Early Bird Abstract Award

**Introduction.** Pain management in patients with metastatic breast cancer, through the integration of palliative care within a curative setting, is a critical research area. Understanding pain trajectories in hospitalized patients is essential to enable early palliative care activation, aiming to improve symptom control, quality of life, and resource use. The aim of this study was to evaluate pain trajectories and time to pain resolution in hospitalized patients with metastatic breast cancer, exploring differences between clinically distinct patient clusters.

**Methods.** A retrospective study was conducted using 2018 data from 161 patients hospitalized for metastatic breast cancer in a medical oncology department. Nursing assessments identified key symptoms, including pain. Longitudinal trajectory analysis revealed two groups: the red cluster, characterized by greater variability and intensity of symptoms and associated with admissions for active chemotherapy, and the blue cluster, characterized by more stable and moderate symptoms, slightly longer hospital stays, and admissions related to symptom management of metastatic disease. A time-to-event analysis was performed to estimate pain resolution.

**Results.** Mean time to pain resolution was 3.8 days (standard error 0.39; 95% CI: 3.0–4.5), with a median of 2 days (standard error 0.06; 95% CI: 1.9–2.1). Significant differences emerged between clusters: the red cluster showed faster pain resolution than the blue cluster, suggesting the potential effectiveness of personalized, patient-centered strategies.

**Discussion.** Findings suggest that early integration of palliative care into oncological pathways may improve pain management in specific patient subgroups. This supports revising protocols to include more frequent assessments and early, personalized, multimodal interventions. Limitations include the retrospective design and variability in pain perception, highlighting the need for prospective studies. Nonetheless, the findings support the integration of palliative care into oncology pathways to

improve patients' quality of life.

**Keywords**: Pain Management, Integrated Palliative Care, Time-to-Event Analysis



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Nurse Researchers in Italian Oncology IRCCSs: Mapping, Roles, and Development Perspectives

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Winner of the Early Bird Abstract Award

**Introduction**. Nursing research in Italy is consolidating through the national collective labour agreement (CCNL); however, the roles of Clinical Research Nurse (CRN) and Nurse Researcher (NR) overlap without a formal distinction within oncology IRCCSs. This ambiguity may limit professional development and independent scientific output. The aim of this study was to describe the presence, roles, and development perspectives of Nurse Researchers in Italian oncology IRCCSs, assessing the distinction between NR and CRN roles and identifying professional development needs.

**Methods.** A descriptive mixed-methods study was conducted. The quantitative component involved mapping CRNs and NRs across 10 oncology IRCCSs using institutional requests, administrative sources, and publicly available documents, with data updated to June 1, 2024. The qualitative component consisted of semi-structured interviews with all four NRs identified nationally, exploring educational background, research activities, critical issues, and future perspectives. Interviews were analysed using thematic analysis.

**Results.** Sixty-one CRNs and four NRs were identified, with NRs present in only two oncology IRCCSs. All NRs acted as Principal Investigators and held advanced qualifications, including two PhDs and two specialist Master's degrees. The main challenges identified were limited organisational support, unclear role definition, heterogeneous contractual arrangements, and difficulties balancing clinical and research activities. Priority areas for development included institutional recognition, dedicated career pathways, a nationally standardised job description, and greater alignment with European models for the professionalisation of the NR role.

**Discussion.** Nurse Researchers represent an emerging but not yet formally structured professional profile within Italian oncology IRCCSs. Institutions that have introduced this role demonstrate an innovative approach, although significant systemic barriers remain. Operational definition of the NR role, alongside standardisation of the CRN profile, represents a strategic priority for advancing autonomous nursing research and strengthening its integration within the Italian National Health Service oncology system. Future developments should include national guidelines and dedicated

educational pathways.

**Keywords:** Nurse Researcher, Nurse Research, Public Oncology Hospital IRCCS



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# The Integrated Approach in Oncology Patients: Care of the Person and Quality of Life

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Winner of the Early Bird Abstract Award

**Introduction.** Palliative care aims to improve the quality of life of patients and their families facing problems associated with incurable diseases through the prevention and relief of suffering. It is not limited to the terminal phase of disease and may complement active treatment from the early stages of cancer to manage symptoms throughout the different phases of illness. Early identification of palliative care needs is essential to provide appropriate, continuous, and patient-centred care. In January 2025, the Interdisciplinary Group for Oncology Care (G.I.C.O.) for simultaneous palliative care was established within the Oncology Department of ASL Teramo, promoting the joint provision of oncology and palliative care from the early stages of advanced disease. The organizational pathway includes initial assessment by the oncology team, multidisciplinary discussion, palliative care evaluation, and identification of the most appropriate setting of care, including outpatient, home-based, and hospice services. The aim of this project was to implement a dynamic organizational model, coordinated by the palliative care nurse case manager and supported by a multidisciplinary team, to enable the early integration of oncology and palliative care through appropriate assessment and monitoring tools.

**Methods.** The project began in January 2025 with the establishment of a multidisciplinary team including referring oncologists, a radiation oncologist, a palliative care specialist, a social worker, a psychologist, nursing coordinators for oncology and the palliative care network, and a nurse case manager responsible for coordinating the group and ensuring continuity of care for patients and families throughout the integrated pathway. Weekly meetings were established to discuss new referrals, patients already receiving simultaneous care, and patients transitioning to exclusive end-of-life care. Three shared operational tools were implemented according to regional guidance: an early palliative care needs reporting form, an early palliative care admission evaluation form, and a simultaneous care monitoring form. These tools included assessment of performance status, pain, symptoms, prognosis, awareness of disease, family and caregiver context, social needs, ongoing treatments, and eligibility for different care settings. Once enrolled in simultaneous care, each patient received an Individualized Care Plan. When appropriate, patients were also included in a telemedicine programme providing televisits, teleassistance, and teleconsultations.

**Results.** Between January and December 2025, 34 interdisciplinary group meetings were held, including 14 in person at the Oncology Unit and 20 online through the institutional platform. A total

of 61 patients with metastatic cancer were identified as eligible for simultaneous care, while 385 cases were discussed overall. The most prevalent symptoms were pain in 60% of cases, fatigue in 55%, and nausea/vomiting in 37%. Treatment-related complications were generally managed at home; however, 22% of patients reporting grade 3 or 4 symptoms required a short hospital stay.

**Discussion.** Shared management between oncology and interdisciplinary palliative care teams may positively affect quality of life, symptom management, resource allocation, and continuity of care. Simultaneous care also has the potential to reduce the psychological burden experienced by caregivers and the sense of abandonment associated with advanced disease. Key elements of early and simultaneous palliative care include integration among healthcare professionals, identification of a clearly defined case manager, progressive informed consent, and advance care planning. Within this model, the nurse case manager plays a central role in coordinating professionals, patients, and families throughout a dynamic and progressively adapted care pathway.

**Keywords**: Simultaneous Care, Early Palliative Care, Continuity Of Care



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## Abstract

# Monitoring Toxicities in Patients Undergoing Chimeric Antigen Receptor T-Cell Therapy: A Prospective Observational Study

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**Introduction.** Chimeric antigen receptor T-cell (CAR-T) therapy has improved outcomes in relapsed/refractory hematologic malignancies, but it is associated with severe toxicities, including cytokine release syndrome (CRS), immune effector cell-associated neurotoxicity syndrome (ICANS), cytopenias, and infections. Early monitoring of toxicities and patient-reported outcomes (PROs) during hospitalization remains poorly described. The aim of this study was to assess treatment-related toxicities and patient-reported outcomes in patients receiving CAR-T-cell therapy.

**Methods.** A prospective, single-center, observational study was conducted in patients treated with CAR-T-cell therapy between April 2022 and April 2025. Major complications and PROs were assessed during hospitalization at baseline (T0), day 7 (T1), and day 14 (T2). The tools used included the ICE score, EuroQol-5D (EQ-5D), Hospital Anxiety and Depression Scale (HADS), Patient-Generated Subjective Global Assessment (PG-SGA), and Cancer Linear Analogue Scale (CLAS). Hematologic risk was stratified using the CAR-HEMATOTOX score. Statistical analysis included descriptive statistics and longitudinal analyses across time points, with statistical significance set at $p < 0.05$.

**Results.** Fifty-seven patients were included; 59.6% were male, with a median age of 59.4 years. Mean hospital stay was 20.65 days, and 7% required intensive care. Severe grade 3-4 ICANS occurred in 3.6% of patients, while CRS developed after a mean of 2.69 days and was grade 3-4 in 5.3% of cases. Anxiety decreased over time ($p = 0.038$; T0-T2 $p = 0.020$), whereas depression remained stable. CLAS scores for mobility, energy, and daily activities did not change significantly, while overall quality of life improved between T1 and T2 ($p = 0.025$). PG-SGA scores worsened from T0 to T1 and improved from T1 to T2 (both $p < 0.001$). Overall, 33.3% of patients were classified as high risk according to CAR-HEMATOTOX.

**Discussion.** CAR-T-cell-related toxicities were overall manageable. Validated assessment scales supported the early recognition of complications and the identification of patient needs. Integrating patient-reported outcomes into clinical monitoring may enhance individualized care, patient safety,

and continuity of care.

**Keywords**: CAR-T Therapy, Toxicities, Patient-Reported Outcomes



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Clinical Feasibility of a Standardized Dietary Protocol for Gastrointestinal Graft-versus-Host Disease: A Pilot Study

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**Introduction.** Diarrhea related to gastrointestinal graft-versus-host disease (GI-GVHD) is a major clinical challenge in patients undergoing hematopoietic stem cell transplantation. Dietary management protocols are widely used to promote stool stabilization, but evidence on their effectiveness remains limited. The aim of this study was to evaluate the clinical feasibility of a standardized dietary protocol in patients with GI-GVHD by longitudinally assessing changes in stool volume, target-range achievement, and stool consistency during treatment.

**Methods.** A single-arm prospective pilot study was conducted in 8 patients, providing 160 daily observations. Twenty-four-hour stool volume, target-range achievement (100–500 mL/24 h), and stool consistency were monitored daily during the dietary protocol. Baseline characteristics and longitudinal trends were summarized using descriptive statistics. Changes in stool volume were analyzed with a linear mixed-effects model; the probability of out-of-range stool output with mixed-effects logistic regression; and stool consistency with ordinal mixed-effects logistic regression.

**Results.** Mean baseline stool volume was 403.8 ± 283.6 mL, and stool consistency was predominantly liquid (87.5%). Stool volume significantly decreased over time, with an average reduction of approximately 33 mL/day ($\beta = -32.84$; SE = 8.28; $p < 0.001$). The likelihood of out-of-range stool output also declined (OR = 0.90; 95% CI: 0.85–0.95; $p < 0.001$). Stool consistency remained mainly liquid, with slightly higher odds of more liquid stools over time (OR = 1.37; 95% CI: 1.23–1.53; $p < 0.001$). Descriptive findings also showed increased caloric intake and clinically meaningful stabilization of stool volume.

**Discussion.** The dietary protocol was associated with reduced stool volume and improved stool output stabilization, although stool consistency remained predominantly liquid. These preliminary findings support the feasibility and potential clinical benefit of dietary management in GI-GVHD and provide a basis for larger confirmatory studies.

**Keywords:** GI-GVHD, Diarrhea, Dietary Protocol



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Prostate Stay Tuned: A Type 2 Hybrid Study for the Development and Implementation of a Nurse-Guided Decision Support Program in Low-Risk Prostate Cancer

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**Introduction**. Prostate cancer is the most commonly diagnosed malignancy in men. The widespread use of PSA testing has increased the detection of low-risk localised tumours, but has also contributed to overdiagnosis and overtreatment. Although active surveillance is recommended as the preferred initial option, its uptake remains uneven. In the Lazio region, contextual analysis identified multilevel barriers: at the macro level, fragmented policies and uneven implementation of Community Health Houses; at the meso level, only 25% of centers had standardized active surveillance workflows and only 2 of 8 hospitals used electronic shared decision-making tools; at the micro level, 52% of men with prostate cancer had limited health literacy and 78% of patients on active surveillance reported anxiety related to "untreated cancer." These findings indicate a significant implementation gap. The aim of this study was to develop, implement, and evaluate Prostate Stay Tuned, a regional nurse-guided decision support program for men with low-risk localised prostate cancer, aimed at reducing inappropriate opportunistic PSA testing and overtreatment.

**Methods.** This is a hybrid type 2 effectiveness implementation study. The project integrates a realist review, contextual analysis, and stakeholder co-design. The Ottawa Decision Support Framework will

guide the identification of decisional needs, decisional conflict, and values clarification; Festinger's cognitive dissonance theory will support the interpretation of the psychological mechanisms that hinder acceptance of active surveillance. The intervention will include a nurse trained in decision coaching, an evidence-based decision aid, a structured care pathway, multiprofessional integration, ongoing training, and audit and feedback.

**Results.** The project is currently in development; available findings derive from the contextual analysis, which indicates low implementation readiness and identifies the main challenges as weak pathway standardisation, limited infrastructure for decision support, and the high emotional burden associated with active surveillance.

**Discussion.** Prostate Stay Tuned frames low-risk prostate cancer as both a clinical and an organisational challenge. For nursing practice, the project may strengthen decision coaching as an advanced competence and support a model that is both applicable and sustainable. The next phases will examine implementation, adherence, and long-term sustainability.

**Keywords**: Implementation Science, Decision Aid, Prostate Cancer



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Breast Cancer, Resilience, Quality of Life, Depression, and Dyadic Adjustment from Diagnosis to 24 Months: A Prospective Pilot Study

**Ilaria Farina[1,2], Lorenzo Capecchi[2,3], Alessia Campoli[2,4], Giulia Manzon[2,4], Chiara Giammaria[2,4], Simona Sgromo[2,4], Aurora De Leo[4], Alessandro Spano[2,4], Albina Paterniani[4], Emanuele Di Simone[5], Fabrizio Petrone[4], Nicolò Panattoni[4], Ángela María Jiménez Urrego[6,7], Alejandro Botero Carvajal[8], Ambra Masiello[9,10]**

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**Introduction**. Breast cancer is the most frequently diagnosed cancer in women and has important effects not only on health but also on the couple's relational life. In Italy, AIOM estimated 53,686 new diagnoses in 2024, with a 5-year net survival of 88%, while GLOBOCAN 2022 reported 57,480 new cases and 15,455 deaths. The literature suggests that couples may react to breast cancer with either vulnerability or adaptation, depending on coping strategies and resilience, viewed as a protective resource that may influence quality of life, depression, and dyadic adjustment. The aim of this study was to explore resilience, quality of life, depression, and dyadic adjustment in women with breast cancer and their cohabiting partners from diagnosis to 24 months.

**Methods.** This prospective pilot mixed-method study was conducted between Italy and Colombia in women with stage I–III breast cancer and their cohabiting partners. The protocol includes longitudinal data collection from baseline to 24 months. The quantitative component includes the EORTC QLQ-C30,

Marital Adjustment Test, PHQ-9, and Resilience Scale, administered separately to each member of the dyad; the qualitative component includes focus groups and phenomenological interviews. This abstract reports a preliminary analysis based on the partial quantitative data currently available, re-elaborated exploratorily according to the study framework on 25 dyads. The study was approved by the Ethics Committee (Sperimentation Registry No. 1718/22).

**Results.** In the exploratory analysis of 25 dyads, higher resilience levels were associated with better global quality of life measured with the EORTC QLQ-C30 ($r = 0.788$; $t(23) = 6.14$; $p < 0.001$) and better functioning ($r = 0.712$; $t(23) = 4.86$; $p < 0.001$), and were inversely associated with symptom burden ($r = -0.793$; $t(23) = -6.24$; $p < 0.001$). Descriptively, male partners showed a tendency toward greater depressive burden, whereas dyadic adjustment appeared overall preserved, although more fragile in sexuality, finances, and shared leisure time.

**Discussion.** Although preliminary and based on partial quantitative data, these findings support a dyadic interpretation of breast cancer and suggest that resilience may act as a protective factor against symptom burden, depression, and relational vulnerability. From a nursing perspective, these preliminary findings support an integrated and longitudinal assessment of the couple and the development of dyad-centred care models from diagnosis to follow-up. Completion of the study will help confirm these preliminary findings and define targeted supportive care interventions.

**Keywords**: Breast Cancer, Resilience, Dyadic Adjustment



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## Abstract

# The Role of the Oncology Nurse in Cornea Procurement: Impact of a Structured Activation Procedure

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**Introduction**. Tissue (corneal) donation from oncology patients requires a rigorous assessment of donor eligibility. The oncology nurse plays a key role in identifying potential donors; however, non-standardized pathways may limit donation opportunities. Following the introduction of a standard operating procedure (SOP), implemented as a hospital procedure and operating instruction primarily involving the nursing role, the objectives were to: assess screening and activation of corneal retrieval in the Medical Oncology Inpatient Unit; analyze the impact of the SOP on the number of donations, completeness of data collection, and cases in which potential donors were not assessed.

**Methods.** A retrospective comparative analysis of corneal procurement data (2024–2025) was conducted before and after implementation of the standard operating procedure, including: systematic medical and nursing screening using a checklist; a direct communication protocol with the hospital procurement coordination team and computerized data collection; donation rates, non-assessed cases, referrals, consents, and refusals.

**Results.** The SOP significantly improved outcomes and resulted in more consistent collection of medical history data: between 2024 and 2025, corneal donations from oncology patients as a proportion of total transplants increased by 7.44 percentage points, from 30/126 to 40/128, respectively; in 2025, the number of potential donors who were not assessed fell to zero (from 11 to 0), while corneal referrals totaled 28; in 2025, total consents (given during life and by legally entitled representatives) increased by 25% (from 15 to 20), while total refusals (during life and by legally entitled representatives) decreased by 30% (from 10 to 7).

**Discussion.** A structured procedure, with a central role for the oncology nurse, optimizes the corneal procurement process. Through proactive screening and accurate data collection, in collaboration

with the physician, the nurse acts as a "safety barrier," ensuring that no potential donor is excluded. Synergy with the procurement team is essential to maximize donations and ensure both the quality and safety of the pathway. The model is replicable and demonstrates that investment in training and tools for nursing staff is crucial to success in this sensitive area.

**Keywords**: Cornea Procurement, Oncology Nurse, Tissue Donation



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## Abstract

# Nurses' Knowledge and Practices Regarding Fertility Preservation in Oncology Patients: An Observational Study

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**Introduction**. Cancer drugs can cause damage to the reproductive system, compromising fertility and the quality of life of people with cancer, both during and after the disease. According to the American Society of Clinical Oncology (ASCO), nurses play a central role in educating cancer patients about fertility preservation (FP). However, the assessment of sexual health needs remains under-recognized in nursing practice, highlighting the need for further investigation of this topic. The aim of this study was to evaluate nurses' knowledge and practices regarding fertility preservation in people with oncological diseases.

**Methods.** A cross-sectional observational study was conducted between January and February 2024. Nurses from three hospitals in Bari were invited to participate. Data were collected through the online administration of a 35-item questionnaire divided into five sections: sociodemographic characteristics, FP training, experience with FP treatments, knowledge of FP, and FP practices.

**Results.** Fifty nurses participated, of whom 68% (n = 34) were women, 34% (n = 17) were younger than 30 years, and 74% (n = 36) worked in medical settings. Only 34% (n = 17) had received adequate training in FP. Most nurses reported never having cared for patients undergoing oocyte preservation (46%; n = 23) or sperm cryopreservation (38%; n = 19). Overall, 44% (n = 22) were unfamiliar with sperm cryopreservation treatments, while only 12% (n = 6) were familiar with oocyte preservation treatments. Forty percent (n = 20) reported rarely discussing fertility-related topics with patients, whereas 48% (n = 24) had referred patients to a fertility specialist during the previous year.

**Discussion.** Nurses' perceived knowledge of FP and their current practices highlight the need to develop targeted educational strategies to safeguard fertility and improve the quality of life of oncology patients. Beginning with the assessment of sexual health needs, nurses can plan interventions aimed at promoting education about fertility preservation and strengthening patient empowerment.

**Keywords:** Fertility Preservation, Nurses, Empowerment



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## Abstract

# Nursing Leadership as a Strategic Lever for Organizational Innovation and Professional Commitment

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**Introduction**. Contemporary healthcare systems require nurses capable of exercising effective leadership at both clinical and organizational levels to support innovation and respond to increasingly complex healthcare needs. Nursing leadership represents a strategic lever for the evolution of care models and for strengthening professional and organizational commitment, both of which are essential to healthcare quality and sustainability. The aim of this contribution was to explore the relationship between nursing leadership and professional and organizational commitment, examining continuing education as an enabling factor and considering its implications for care models, continuity of care, and multiprofessional integration.

**Methods.** A theoretical-professional analysis was developed from nursing management experience and integrated with scientific literature and national and international institutional documents. The analysis focused on three areas: the relationship between transformational leadership and commitment, the role of continuing education as an enabling factor, and the expression of leadership within care models and professional integration processes.

**Results.** Transformational leadership was associated with stronger professional commitment, expressed through professional identity, autonomy, and advocacy, and with organizational commitment, reflected in adherence to organizational values and objectives. Roles such as case manager and care coordinator emerged as expressions of distributed leadership across the care continuum, supporting holistic patient management, coherence of interventions within multiprofessional teams, and the identification of reference professionals for patients and families.

**Discussion.** Investing in nursing leadership may simultaneously strengthen professional commitment and the quality of care models. Higher professional and organizational commitment appears to be associated with a greater propensity to exercise leadership in clinical practice, with potential effects on innovation and continuity of care. Targeted educational pathways and organizational models that recognize leadership roles across the care continuum therefore represent priorities for contemporary healthcare organizations.

**Keywords**: Nursing Leadership, Professional And Organizational Commitment, Continuing Education

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Evaluating Nursing Case Management at a High-Risk Center: Study Protocol on Patients' Perceptions of the Nurse Case Manager within the Oncogenetic Pathway

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**Introduction**. Cancer genetics is a rapidly evolving field in the prevention and management of risk among individuals carrying hereditary pathogenic variants. Patients enrolled in surveillance programmes follow complex care pathways involving periodic follow-up, preventive decision-making, and substantial informational and emotional needs. Within this context, the Nurse Case Manager (NCM) may play a pivotal role in care coordination, communication, and patient support. However, few instruments are currently available to assess patient-reported experiences and perceived outcomes within oncogenetic care pathways. The aim of this study was to develop a questionnaire to explore patient-reported experiences and perceived outcomes related to care provided by the NCM within oncogenetic surveillance pathways.

**Methods.** A structured questionnaire was developed following a literature review on patient-reported outcomes, patient-reported experiences, and case management models in oncology. The instrument includes items designed to investigate the main dimensions of the care experience and underwent internal review to assess clarity and relevance. It is organised into seven sections addressing accessibility of the nursing role, informational support, coordination of the surveillance pathway, decision-making support, and perceived continuity of care. The questionnaire will be administered to patients enrolled in the oncological surveillance programme at the High-Risk Center as of December 31, 2025. Data will be analysed using descriptive statistics.

**Results.** It is hypothesised that the presence of a dedicated NCM will be associated with higher perceived informational support, better understanding of the surveillance pathway, and more effective coordination of healthcare services. Expected findings include identification of the care-experience dimensions most relevant to patients and a preliminary assessment of the perceived usefulness of the NCM.

**Discussion.** Systematic evaluation of patient-reported experiences may provide an important basis for improving the quality of oncogenetic pathways and strengthening patient-centred models of care. The findings may contribute to consolidating the role of the NCM in genetic surveillance programmes and inform future research on care outcomes.

**Keywords**: Nurse Case Manager, Oncogenetics, Patient-Reported Experience



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## Abstract

# Digitalization of the Oncology Care Pathway: Integration of APOTECAchemo Robotic Compounding and the Electronic Health Record. Benefits for Safety, Quality, and Process Organization

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**Introduction**. The digitalization of the oncology care pathway is a key objective of Italy's National Recovery and Resilience Plan (PNRR), which supports the technological development of the National Health Service with the aim of reducing clinical risk, consistently with Ministerial Recommendation No. 14. The aim of this study was to evaluate the impact of integrating the APOTECAchemo robotic antineoplastic drug compounding system with the BiMind electronic health record on clinical traceability, gravimetric accuracy, preparation times, prescription workflow, and costs within the oncology pathway.

**Methods.** A retrospective observational study was conducted at the Antineoplastic Drugs Unit of Murri Hospital in Fermo between December 1, 2025, and February 28, 2026. A total of 1,340 preparations over 60 working days were analyzed according to management system (BiMind, n = 921; paper-based, n = 419) and compounding method (robotic, n = 362; biological safety cabinet, n = 559). Accuracy was evaluated using percentage gravimetric deviation. Economic analysis compared drug costs before and after system implementation. Statistical analyses were performed using LibreOffice Calc, with checks

conducted using Python 3.12.

**Results.** Digital implementation ensured 100% traceability of critical variables, including allergies and clinical alerts, whereas the paper-based system was associated with data loss. Robotic preparations achieved 100% compliance with Pharmacopeia limits (±10%); this parameter could not be calculated for manual compounding. Mean gravimetric error was −1.043% (SD 1.25). Median preparation times were 45 minutes for robotic compounding and 35 minutes for manual compounding. However, digitalization enabled advance scheduling of 21.5% of doses, improving workflow organization. Despite a 22.9% increase in workload, improved management of residual drugs was associated with a 7.2% reduction in the average cost per vial.

**Discussion.** The integration of robotic compounding systems and health information technologies improves the safety, quality, traceability, and sustainability of the oncology care pathway. Digitalization may support more efficient use of clinical and economic resources while strengthening process standardization and organizational management.

**Keywords**: Oncology Care Pathway, Robotic Drug Compounding, Digital Health Systems



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Co-Design of Educational and Digital Interventions in Oncohematology: A Scoping Review

**Simona Sgromo[1,2], Nicolò Panattoni[1], Chiara Giammaria[1,2], Giulia Manzon[1,2], Alessia Campoli[1,2], Alessandro Spano[1,2], Ilaria Farina[1,2], Albina Paterniani[1], Emanuele Di Simone[3], Fabrizio Petrone[1], Aurora De Leo[1]**

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**Introduction**. Patients with hematological malignancies and their caregivers face substantial informational, psychological, and organizational needs throughout the disease trajectory. Participatory design approaches based on iterative processes and active user involvement have emerged as promising strategies for developing educational and digital interventions aligned with the needs and preferences of target populations. However, their application in oncohematology remains poorly explored. The aim of this scoping review was to map co-designed interventions involving patients and caregivers, describe user involvement strategies, and synthesize reported barriers, facilitators, and clinical effectiveness outcomes.

**Methods.** A scoping review was conducted according to JBI methodology and the Arksey and O'Malley framework. Primary studies of any design published in English or Italian were eligible if they involved patients with hematological malignancies and/or caregivers, described the iterative development of interventions, and included active user involvement across multiple stages. Studies limiting user involvement to the final stages, as well as secondary studies, abstracts, editorials, and conference papers, were excluded. PubMed, MEDLINE, Scopus, and CINAHL were searched from inception to October 30, 2025.

**Results.** Six studies met the inclusion criteria. Considerable heterogeneity was observed in the digital tools developed, theoretical frameworks adopted, and strategies used to involve patients and caregivers. The included studies also identified several barriers and facilitators influencing the co-design process.

**Discussion.** Co-design appears to be a feasible and promising approach in oncohematology, although its implementation remains limited. Identified barriers highlight the need for flexible and adaptive design processes. Current evidence primarily focuses on process and usability outcomes, while evidence regarding clinical effectiveness remains limited. Future research should standardize reporting of user involvement and systematically evaluate the effects of co-designed interventions on

clinical and experiential outcomes.

**Keywords**: Co-Design, Digital Health, Hematologic Neoplasms



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## Abstract

# Advanced Competencies in Oncology Nursing: A Framework for Clinical Practice and Care Outcomes

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**Introduction**. The evolution of oncology, characterized by increasing clinical complexity and therapeutic innovation, requires the strengthening of nursing competencies. Evidence indicates that advanced competencies are associated with improved clinical outcomes, greater patient safety, and higher quality of care. However, within the Italian context, the development and recognition of these competencies remain heterogeneous. The aim of this study was to define a framework of advanced competencies in oncology nursing applicable across different care settings, with particular attention to clinical outcomes and quality of care.

**Methods.** A narrative review of international literature and major competency frameworks was conducted and integrated with an analysis of the Italian context. Based on the evidence identified, a structured model of competency domains relevant to advanced oncology nursing practice was developed.

**Results.** The proposed framework identifies nine domains of advanced competencies: oncology sciences; pharmacology and treatment management; advanced clinical assessment; symptom management; therapeutic communication; palliative care and survivorship; clinical leadership; research and evidence-based practice; and continuity of care. The implementation of these competencies is associated with improved outcomes, reduced complications, greater patient safety, and increased appropriateness of care.

**Discussion.** Advanced competencies represent a key component in the evolution of oncology nursing practice and may contribute to more effective management of increasingly complex care pathways and earlier identification of complications. Their implementation in Italy remains limited by variability in educational pathways and organizational recognition. The adoption of a structured competency framework may promote standardization, safety, continuity of care, and improved clinical outcomes across oncology settings.

**Keywords**: Advanced Nursing Competencies, Oncology Nursing, Patient Safety

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Factors Associated with Early Diagnosis and Access to Care among Immigrant Women with Cervical Cancer in Italy: Protocol for a Multicenter Mixed-Methods Study

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**Citation:** Gorgati, E., Cuoco, A., Lotfi, F., Boughriou, M., Zendehdel, K., Boffetta, P., & Biagioli, V. (2026). Factors associated with early diagnosis and access to care among immigrant women with cervical cancer in Italy: Protocol for a multicenter mixed-methods study. *International Journal of Health Supplements*, 1(Suppl. 2), 180–181. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Despite being largely preventable through HPV vaccination and screening, cervical cancer remains a significant public health burden and a marker of health inequalities. In Italy, immigrant women account for more than 2.6 million residents and have a more than threefold higher risk of disease compared with Italian women, lower participation in screening programs, and reduced adherence to follow-up after abnormal results, with diagnosis at a younger age and at more advanced stages. However, evidence on the determinants of access to early diagnosis and care among immigrant populations remains limited. The aim of this study was to generate an in-depth understanding of the factors influencing early diagnosis and access to care among immigrant women in Italy from high-migratory-pressure countries diagnosed with cervical cancer or high-grade squamous intraepithelial lesions (HSIL).

**Methods.** This study is part of the DCIMIT project supported by AIRC (MFAG 30481). It is a non-profit, observational, cross-sectional, multicenter study using a convergent mixed-method design. A competitive enrollment model will be implemented across 10 participating sites. A total of 300 immigrant women, comprising 50% with HSIL and 50% with cervical cancer, will be enrolled during follow-up visits. The quantitative phase includes a questionnaire collecting clinical, sociodemographic, social integration, quality-of-life and behavioral data, experiences of discrimination, and perceived barriers and facilitators to care. A subsample of approximately 60 participants will undergo semi-structured interviews exploring their lived experiences of early diagnosis and access to care. Quantitative and qualitative data will be analyzed separately and subsequently integrated.

**Results.** Ethical approval from the coordinating center has been obtained. The study is ongoing, with recruitment planned over a two-year period. The study is expected to estimate the prevalence of key determinants of access to early diagnosis and care and identify differential patterns across ethnic subgroups. Integration of quantitative and qualitative findings will provide a comprehensive understanding of barriers and facilitators to care.

**Discussion.** An integrated understanding of individual, sociocultural, and organizational determinants may inform future targeted healthcare and organizational strategies aimed at reducing inequalities in access to prevention, early diagnosis, and care, thereby strengthening equity in oncological screening programs.

**Keywords**: Early Diagnosis, Healthcare Access, Immigrant Women



**Funding:** This study is part of the DCIMIT project, supported by AIRC (MFAG 30481). **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Patients Undergoing Chemotherapy Desensitization: A Pilot Study on Emotional Impact of Hypersensitivity Reactions and Evaluation of a Printed Educational Tool

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**Introduction.** Hypersensitivity reactions (HSRs) to chemotherapy agents represent a major clinical challenge in oncology and may lead to the interruption of potentially life-saving treatments. Rapid desensitization protocols enable many patients with prior HSRs to safely continue first-line therapies. However, the psychological burden associated with these reactions is often underestimated. The aim of this study was to assess the emotional impact of chemotherapy-related HSRs and to evaluate whether a written educational tool provided during desensitization could reduce patient-reported anxiety.

**Methods.** A randomized two-group pilot study was conducted including 70 adult cancer outpatients undergoing rapid desensitization at a cancer center in Southern Italy. All participants received standard multidisciplinary care. The intervention group (n = 37) additionally received a validated printed information leaflet delivered midway through the desensitization protocol and reinforced by a brief nurse-led educational conversation. Anxiety and emotional distress were assessed at the beginning (T0) and at the end (T1) of the procedure using the Generalized Anxiety Disorder-7 (GAD-7) and the

Hospital Anxiety and Depression Scale (HADS). Data were analyzed using paired and independent t-tests, ANCOVA, and linear mixed-effects models.

**Results.** Participants were predominantly female (81.4%), with a mean age of 61 years. Baseline distress was high: 50% of patients met the GAD-7 clinical threshold and 68.6% scored above the HADS total cut-off. Mean GAD-7, HADS-A, and HADS-D scores showed small decreases from T0 to T1 in both groups; however, no statistically significant within- or between-group differences were observed (all $p > 0.05$; negligible to small effect sizes). Multivariable models confirmed no independent effect of the leaflet beyond baseline anxiety levels.

**Discussion.** Cancer patients undergoing desensitization for chemotherapy-related HSRs represent a psychologically vulnerable subgroup with markedly elevated anxiety and emotional distress. In the context of comprehensive multidisciplinary counseling, a single written information leaflet did not significantly reduce anxiety or depressive symptoms during the procedure. Routine psychological screening and more intensive, multimodal, and longitudinal supportive interventions appear warranted within allergologic-oncologic desensitization pathways.

**Keywords**: Chemotherapy Desensitization, Hypersensitivity Reactions, Anxiety



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Palliative Care in the Emergency Department: Exploring Nurses' Educational Needs Through an Italian Convergent Mixed-Methods Approach

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**Citation:** Bottero, L., Ramassotto, B., Costamagna, G., Ricotti, A., Mezzabotta, M., Clari, M., Dimonte, V., & Albanesi, B. (2026). Palliative care in the emergency department: Exploring nurses' educational needs through an Italian convergent mixed-methods approach. *International Journal of Health Supplements,* 1(Suppl. 2), 184–185. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. The progressive increase in population frailty and vulnerability has led to a growing need for palliative care (PC) across healthcare settings, including the emergency department (ED). ED nurses play a key role in caring for patients with palliative care needs in acute and complex situations, making the identification of their educational needs essential to improving care quality. The aim of this study was to explore the educational needs of ED nurses regarding palliative and end-of-life care.

**Methods.** A convergent mixed-methods study was conducted in October 2024. Quantitative data were collected using two validated self-report questionnaires comprising 42 items and exploring knowledge, attitudes, and practices regarding palliative care. One questionnaire was specifically developed for ED nurses, while the other targeted non-ED nurses. Qualitative data were collected through two online focus groups and analyzed using thematic analysis. Quantitative and qualitative findings were subsequently integrated through convergent analysis. The study received approval from the Local Ethics Committee.

**Results.** Forty-two of 68 nurses participated in the quantitative phase (response rate 61.8%). The mean knowledge score was 159.3 (SD = 33.9; range 84–238), corresponding to 66.3% of the maximum score and indicating a moderate level of knowledge. Lower self-confidence emerged in discussing death and mortality (mean = 3.3/10; SD = 2.0), while difficulties were identified in the use of non-pharmacological strategies for pain management (mean = 4.0/10; SD = 3.0). Qualitative findings from nine participants highlighted logistical barriers and insufficient perceived training as major obstacles to providing PC in the ED. Integrated analysis also identified insufficient preparation concerning ethical and moral dimensions of palliative care and organizational constraints.

**Discussion.** The study highlights specific educational and organizational needs among ED nurses involved in palliative care. The findings identify key areas for targeted interventions aimed at improving clinical practice and supporting continuing professional development in emergency palliative care.

**Keywords:** Palliative Care, Emergency Department, Educational Needs



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# COMPASS-ONC: Explainable Artificial Intelligence for the Early Identification of Palliative Care Needs in Oncology

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**Introduction.** In oncology patients, the identification of palliative care needs is still often delayed and inconsistent, with negative consequences for symptom control, continuity of care, appropriateness of care pathways, and quality of life. In this context, artificial intelligence could represent an innovative tool to support an earlier, more equitable, and more systematic recognition of these needs. The aim of this project is to develop and preliminarily validate an explainable machine learning algorithm for the early identification of palliative care needs in the oncology population, in order to support appropriate referral, proactive care planning, and integration across care settings.

**Methods.** The project is based on the Medical Research Council framework for complex interventions. The development phase includes evidence review, conceptual model definition, and construction of a multidimensional dataset including clinical, functional, psychosocial, and caregiver-related variables. The algorithm will be developed using ensemble machine learning models and made interpretable through Explainable Artificial Intelligence techniques. Preliminary validation on historical data is planned, followed by a pilot study in community-based palliative care settings. Evaluation will address predictive performance, usability, acceptability, organizational impact, and ethical governance, with specific attention to algorithmic bias and preservation of clinical decision-making autonomy.

**Results.** Expected outcomes include a validated and clinically interpretable algorithm able to improve the timely identification of cancer patients with palliative care needs. Anticipated results include improved referral appropriateness, stronger continuity across hospital, community, and home care, reduced inappropriate acute care use, and improved perceived quality of care.

**Discussion.** COMPASS-ONC proposes an innovative model with strong translational potential for integrating artificial intelligence into oncology and nursing practice. Early identification of palliative care needs through explainable, person-centred tools may contribute to more appropriate, equitable,

and sustainable care pathways, with relevant clinical, organizational, and research implications.

**Keywords**: Artificial Intelligence, Palliative Care, Oncology Nursing



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Patterns of Missed Nursing Care in Oncology: An Observational Study in a Primary Nursing Context

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**Introduction.** Increasing care complexity and shrinking resources expose healthcare systems to the risk of Missed Nursing Care. This phenomenon is associated with adverse clinical and professional outcomes. In oncology, this vulnerability is further amplified by the need to ensure continuity of care, patient education, and a trusting therapeutic relationship. In this context, Primary Nursing may help reduce omissions through accountability and continuity in care delivery; however, evidence remains limited, particularly in the Italian setting.

**Methods.** A monocentric, cross-sectional descriptive observational study was conducted in an Italian oncology IRCCS adopting the Primary Nursing model. Following approval by the Lombardia 2 Territorial Ethics Committee, data were collected digitally between January and February 2026 using the validated Italian version of the MISSCARE Survey. Nurses and healthcare assistants working in medical and surgical wards who provided informed consent were enrolled (n = 79). Data were analysed using descriptive and inferential statistics.

**Results.** Correlational analyses showed that Missed Nursing Care was not randomly distributed but tended to cluster into recurring patterns. The strongest association emerged between discharge planning and therapeutic education for patients and their families ($\rho = 0.816$), suggesting a close interdependence between continuity of care and educational care management. Additional clusters involved clinical reassessment, patient condition assessment, monitoring, and treatment management. Strong correlations also emerged among organizational determinants, particularly within relational and communication-related dimensions. Compared with the literature, a partly different profile was observed: omissions related to patient education and continuity of care, often reported among the most frequent, were less represented in this setting, whereas some basic care activities appeared more prominent.

**Discussion.** The strongest correlations among care activities and organizational determinants suggest that the omission of a single care activity may act as a sentinel indicator of broader systemic criticalities. From this perspective, the nurse manager plays a strategic role in identifying and

addressing these clusters, thereby guiding targeted organizational interventions.

**Keywords**: Missed Nursing Care, Oncology Nursing, Primary Nursing



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Care Needs in Cancer Survivorship: A Scoping Review

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**Citation:** Sirò, O., Moro, A., Gammone, M., Barbieri, M., Maddalo, C., Mezini, S., Di Nitto, M., Zanini, M., Sasso, L., Catania, G., & Bagnasco, A. (2026). Care needs in cancer survivorship: A scoping review. *International Journal of Health Supplements,* 1(Suppl. 2), 190–191. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Cancer survivorship requires comprehensive, person-centred care addressing needs and outcomes across the disease trajectory. However, evidence on the care needs most frequently reported by adult cancer survivors and on the outcomes assessed in oncology settings remains fragmented. This scoping review aimed to map the nursing literature on patients' needs and outcomes in adult oncology care across hospital, outpatient, and home care settings, with a specific focus on cancer survivorship.

**Methods.** The review was conducted according to the Joanna Briggs Institute methodology, based on the Arksey and O'Malley framework and subsequent updates by Levac et al., and reported in line with PRISMA-ScR. In March 2025, a systematic search was performed in MEDLINE, CINAHL, Web of Science, PsycINFO, and Embase using a Population, Exposure, Outcome framework. Primary quantitative and qualitative studies published in English or Italian, with no time restrictions, were eligible if they addressed adult oncology patients' needs and/or outcomes. Records were managed in Rayyan, duplicates were removed, and screening was performed independently by reviewers in blinded mode, with disagreements resolved through discussion. Data were extracted using a predefined matrix, and studies were classified according to the care continuum and nursing-sensitive outcome domains.

**Results.** Ninety-five studies published between 1996 and 2025 were included, yielding 227 outcomes. The most frequently investigated categories were symptoms (n = 44), quality of life (n = 43), unmet needs (n = 40), and emotional well-being (n = 36), whereas self-care (n = 3) and role functioning (n = 11) were marginally represented. Most studies were conducted in English-speaking countries (51.6%), while Italian evidence was almost absent (n = 1). Cross-sectional and longitudinal observational designs predominated. Men, young adults, and older adults were underrepresented. No study primarily focused on social and relational needs.

**Discussion.** Current literature mainly addresses measurable clinical outcomes, while social and work reintegration, relationships, and self-management remain overlooked. More Italian research, experimental studies on nursing interventions, and more equitable sampling are needed. Oncology nurses should play a central role in developing integrated, evidence-based care models responsive to survivors' multidimensional needs.

**Keywords:** Cancer Survivorship, Patient Needs, Patient-Reported Outcomes



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Virtual Reality During Chemotherapy: Cybersickness and Patient Satisfaction

**Sara Leoperdi[1], Serena Caponetti[1], Renato Rocchi[2], Giampietro Beltrami[3], Chiara Mazzoni[1], Alessandra Marsili[1], Lorenzo Rogante[1], Dorina Mihalache[1], Rosella Morelli[1], Laura Monterubbiano[1], Cristina Urbani[1], Valentina Micheluzzi[4], Francesco Burrai[4]**

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**Citation:** Leoperdi, S., Caponetti, S., Rocchi, R., Beltrami, G., Mazzoni, C., Marsili, A., Rogante, L., Mihalache, D., Morelli, R., Monterubbiano, L., Urbani, C., Micheluzzi, V., & Burrai, F. (2026). Virtual reality during chemotherapy: Cybersickness and patient satisfaction. *International Journal of Health Supplements*, 1(Suppl. 2), 192–193. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Chemotherapy is often associated with discomfort factors that negatively affect the patient experience. Virtual Reality (VR) is increasingly proposed as a non-pharmacological intervention to improve comfort; however, evidence regarding cybersickness and patient satisfaction during chemotherapy remains limited. This gap is particularly relevant to nursing practice, as nurses play a central role in symptom monitoring, supportive care, and the implementation of person-centred interventions. The aim of this study was to assess cybersickness and patient satisfaction with the use of VR during chemotherapy.

**Methods.** A descriptive observational study was conducted in an oncology setting. Nurses trained through an accredited continuing education course on VR instructed patients on its use. VR scenarios included 200 natural environments. Cybersickness was assessed using the VR Cybersickness Symptom Questionnaire, which evaluates 12 non-ocular and 11 ocular symptoms on a 0–6 scale, where 0 indicates no symptoms and 6 indicates severe symptoms. Patient satisfaction was assessed using the VR Patient Satisfaction Questionnaire. Both questionnaires were administered immediately after the VR experience.

**Results.** A total of 76 patients were enrolled, with a mean age of 65.2 years (SD 10.8); 71.1% were male and 28.9% female. Cybersickness was low, with a mean total score of 7.5 (SD 15.5; 95% CI 3.9–11.0). Overall, 42.1% of participants reported no symptoms (95% CI 31.6–53.3), while 84.2% had a total score ≤2 (95% CI 74.4–90.7). Satisfaction was high, with a mean total score of 35.0/40 (SD 5.7; 95% CI 33.7–36.3). The highest scores concerned willingness to recommend VR (mean 4.61; SD 0.82; $p < 0.001$), pleasantness of the scenarios (mean 4.58; SD 0.77; $p < 0.001$), usefulness during treatment (mean 4.50; SD 0.77; $p < 0.001$), and consistency with expectations (mean 4.49; SD 0.86; $p < 0.001$).

**Discussion.** The use of VR during chemotherapy appeared feasible, well accepted, and associated with limited cybersickness in most patients. For nursing practice, VR may represent a useful supportive intervention to improve comfort and the treatment experience without generating a significant additional workload.

**Keywords:** Virtual Reality, Patient Satisfaction, Cybersickness



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# The Use of Patient-Reported Outcome Measures (PROMs) in Cancer Patients with Penile Cancer: A Scoping Review

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**Citation:** Basile, I., Rusconi, D., Bruno, M., Greco, C., Pazzaglia, M. S., & Consolo, L. (2026). The use of Patient-Reported Outcome Measures (PROMs) in cancer patients with penile cancer: A scoping review. *International Journal of Health Supplements*, 1(Suppl. 2), 194–195. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Penile cancer has an incidence of approximately 1–2 cases per 100,000 men and is associated with substantial clinical and psychosocial consequences, including alterations in body image, sexual function, emotional well-being, intimate relationships, and quality of life. Patient-Reported Outcome Measures (PROMs) provide a fundamental approach to monitoring patient well-being and personalizing care pathways. However, evidence regarding their specific application in penile cancer remains fragmented. The aim of this scoping review was to map the available evidence on the use of PROMs in patients with penile cancer, with particular attention to their contribution to quality-of-life assessment, symptom monitoring and management, and patient–clinician communication.

**Methods.** A scoping review was conducted according to the Arksey and O'Malley framework and PRISMA-ScR guidelines. CINAHL, PubMed, Embase, Scopus, PsycINFO, and Web of Science were searched. Primary studies published between 2014 and 2025 in Italian or English and involving validated PROMs in adult patients were included. Study selection was performed through independent double screening, and the findings were synthesized narratively.

**Results.** A total of 29 studies were included from 1,238 records identified. Fifteen PROMs were identified: 10 generic measures, including the EORTC QLQ-C30, SF-36, EQ-5D, and HADS, and five instruments addressing sexual or urinary function, including the IIEF-5, IIEF-15, and IPSS. Only one study used the HRO-PE29, a measure specifically developed for penile cancer. The systematic use of PROMs supported the early identification of sexual dysfunction, anxiety, and body image alterations. PROMs also facilitated communication about sensitive issues, particularly sexuality, by reducing patient embarrassment.

**Discussion.** Generic PROMs may not fully capture the complexity of the experiences of patients with penile cancer. Although the development of the disease-specific HRO-PE29 represents an important advancement, its clinical implementation remains limited. PROMs represent valuable tools for supporting personalized care and strengthening communication between patients and healthcare professionals. Further implementation and validation of disease-specific measures may improve the assessment of outcomes that are particularly relevant to this population.

**Keywords:** Patient-Reported Outcome Measures, Penile Cancer, Quality Of Life



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Operating Room Nurses' Knowledge of Patient-Reported Outcome Measures and Patient-Reported Experience Measures in Oncological Surgery

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**Citation:** Giammaria, C., Spano, A., Bruno, M., De Leo, A., Sgromo, S., Campoli, A., Manzon, G., Di Simone, E., Petrone, F., & Panattoni, N. (2026). Operating room nurses' knowledge of Patient-Reported Outcome Measures and Patient-Reported Experience Measures in oncological surgery. *International Journal of Health Supplements*, 1(Suppl. 2), 196–197. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs) are key tools for assessing outcomes and patients' perceptions of their healthcare experience. Operating room nurses play a central role throughout the surgical pathway; however, evidence regarding their knowledge and awareness of the potential clinical use of PROMs and PREMs in oncological surgery remains limited in Italy. The aim of this study was to assess operating room nurses' knowledge of PROMs and PREMs in the perioperative oncology setting.

**Methods.** A descriptive observational study was conducted among 58 operating room nurses working in oncological surgery. Data were collected anonymously through an online questionnaire administered nationwide via Google Forms® in March 2026. The questionnaire included eight sociodemographic and professional questions and 21 items rated on a five-point Likert scale. Statistical and correlational analyses were performed using PSPP software, version 2.0.0.

**Results.** The mean questionnaire score was 2.35 ± 0.58, indicating an overall limited level of knowledge regarding PROMs and PREMs among the participating operating room nurses.

**Discussion.** Specific training in PROMs and PREMs was associated with higher theoretical knowledge ($r = 0.453$; $p < 0.001$). Theoretical knowledge was also positively correlated with nurses' perception of their role in the use of PROMs and PREMs ($r = 0.451$; $p < 0.001$), suggesting that even basic knowledge may improve awareness and attitudes toward their implementation. Higher educational levels were associated with greater knowledge ($\rho = 0.34$; $p = 0.009$), while the presence of structured organizational procedures incorporating PROMs and PREMs showed an even stronger association ($\rho = 0.53$; $p < 0.001$). Overall, the findings highlight the need for structured educational programmes and organizational strategies to facilitate the integration of PROMs and PREMs into perioperative oncology practice.

**Keywords:** Oncology Nursing, Patient-Reported Outcome Measures, Patient-Reported Experience Measures



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Cancer Care in Humanitarian Crises: A Scoping Review of the Impact of the Conflict in the Gaza Strip (2023–2026)

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**Citation:** Di Nardo, V. (2026). Cancer care in humanitarian crises: A scoping review of the impact of the conflict in the Gaza Strip (2023–2026). International Journal of Health Supplements, 1(Suppl. 2), 198. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** The ongoing conflict in Gaza has had profound humanitarian consequences for its residents. Cancer patients are among the most vulnerable populations, as the conflict severely restricts access to diagnosis and treatment. Approximately 10,000 people are living with cancer in Gaza, with more than 2,000 new cases diagnosed each year. Despite the increasing cancer burden among forcibly displaced populations, evidence supporting equitable and needs-based cancer responses remains scarce. The aim of this study was to understand the impact of the conflict in the Gaza Strip on cancer care.

**Methods.** A scoping review was conducted using the PCC framework: Population, cancer patients residing in the Gaza Strip; Concept, critical challenges in cancer care delivery; and Context, the Gaza Strip health system. Searches included PubMed, Scopus, and World Health Organization reports.

**Results.** Gaza's only cancer hospital ceased functioning on November 1, 2023. Destruction of healthcare infrastructure, loss of healthcare professionals, and shortages of essential supplies have contributed to delayed cancer diagnosis and treatment and progression toward advanced, often incurable, disease. Cancer patients also experience substantial psychological distress related to continuous exposure to violence, fear, despair, stress, and malnutrition. These conditions further compromise patients' ability to cope with disease and adhere to treatment, while limited resources mean that their needs may not receive adequate priority.

**Discussion.** Providing cancer care in conflict-affected settings raises complex ethical challenges. Oncology requires specialized treatments, diagnostics, infrastructure, and considerable resources that may be unavailable during humanitarian crises. Scarcity forces difficult decisions concerning justice, prioritization, and the balance between curative and palliative goals. Cancer care in humanitarian crises therefore represents not only a clinical challenge, but also a moral imperative and a test of global solidarity.

**Keywords:** Cancer Care, Humanitarian Crises, Gaza



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# Abstract

# Longitudinal Assessment of Financial Toxicity in Oncology: Observational Study Protocol

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**Citation:** Consolo, L., Vela, C., Basile, I., Rusconi, D., Cristarella, E., Bruno, M., & Pazzaglia, M. S. (2026). Longitudinal assessment of financial toxicity in oncology: Observational study protocol. *International Journal of Health Supplements*, 1(Suppl. 2), 199. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Financial toxicity (FT) is increasingly recognized as an important determinant of oncological outcomes, affecting quality of life, treatment adherence, and survival. In universal healthcare systems such as the Italian system, the phenomenon remains poorly characterized and is likely underestimated. The recent validation of the Patient-Reported Outcome for Fighting Financial Toxicity (PROFFIT) provides a specific instrument for its assessment; however, longitudinal evidence regarding its evolution and association with clinical outcomes remains limited. The aim of this study was to evaluate changes in financial toxicity over time and analyze its association with quality of life, severe toxicity, and survival in patients with genitourinary and gastrointestinal cancers.

**Methods.** A prospective longitudinal observational study is being conducted at Fondazione IRCCS Istituto Nazionale dei Tumori di Milano. Adult patients (≥18 years) with metastatic genitourinary or gastrointestinal cancers eligible for first-line treatment will be enrolled. The estimated sample size is 196 patients ($\alpha = 0.05$; power = 0.80; effect size = 0.10; 20% dropout). Financial toxicity will be assessed using PROFFIT, while quality of life will be measured using the EORTC QLQ-C30 at three time points: T0, T1 (2–3 months), and T2 (5–6 months). Clinical data will include grade ≥3 adverse events, survival, and treatment persistence. Analyses will include linear mixed models, regression models, and survival analyses. The study was approved by the Ethics Committee Lombardia 4 (No. 106/25).

**Results.** The study is currently ongoing, with 10 patients enrolled to date. Changes in financial toxicity throughout oncological treatment are expected, together with associations between financial toxicity, quality of life, and clinical outcomes. These findings may allow the identification of clinical and socioeconomic risk profiles.

**Discussion.** Assessing financial toxicity in a highly specialized oncology setting will provide insight into its evolution among patients undergoing complex and prolonged treatments. The longitudinal design will enable observation of financial toxicity throughout the therapeutic pathway, while the use of PROFFIT will provide a specific measure adapted to the Italian context.

**Keywords:** Financial Toxicity, Patient-Reported Outcomes, Quality Of Life



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# The Use of Patient-Reported Outcome Measures in Simultaneous Palliative Care Pathways in Oncology: A Scoping Review

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**Citation:** Rusconi, D., Basile, I., Bruno, M., Greco, C., Pazzaglia, M. S., & Consolo, L. (2026). The use of Patient-Reported Outcome Measures in simultaneous palliative care pathways in oncology: A scoping review. *International Journal of Health Supplements,* 1(Suppl. 2), 200–201. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Simultaneous Palliative Care (SPC) is recommended in oncology to improve quality of life (QoL), symptom control, and patient-centred care alongside active treatments. However, its provision lacks standardized activation criteria, faces resistance to early integration, and raises sustainability concerns. "Precision SPC" has emerged to tailor integration to individual needs. Patient-Reported Outcome Measures (PROMs) have gained attention as tools to assess patients' needs and inform clinical decisions, although their use within SPC pathways remains heterogeneous and poorly defined. The aim of this scoping review was to map the use of PROMs within SPC pathways in oncology, focusing on their integration into clinical practice and their reported impact.

**Methods.** A scoping review was conducted following the Arksey and O'Malley framework and Levac's recommendations. MEDLINE, CINAHL, Embase, PsycINFO, Scopus, and Web of Science were searched for studies published between 2015 and 2025 involving SPC in oncology and reporting PROM use. Title/abstract screening and full-text selection were independently performed by two reviewers, with disagreements resolved by a third reviewer.

**Results.** Of 6,379 screened records, 16 studies were included. PROMs were mainly used as outcome measures during SPC (11/16), less frequently as triggers for SPC activation (5/16), while four studies used them for both purposes. The most frequently used instruments were the EORTC QLQ-C30 (n = 6), HADS (n = 6), FACT (n = 5), PHQ-9 (n = 4), and ESAS-based tools (n = 2). Eight studies defined PROM-based cut-off scores to trigger SPC activation. Structured threshold-based models improved referral rates (43.9% vs 8.3%; $p < 0.001$) and SPC receipt (45% vs 17%; $p = 0.009$), while reducing systemic therapy during the last 14 days of life (13.4% vs 23.9%; $p = 0.01$). Reductions in symptom burden (ESAS −1.88/month; $p = 0.004$) and depression (PHQ-9 −0.57/month; $p = 0.001$) were also observed.

**Discussion.** PROMs are widely used within SPC pathways, but predominantly as outcome measures rather than activation tools. The absence of a standardized instrument and validated activation thresholds limits scalability and comparability. Future research should prioritize standardized PROM-

based activation protocols and clinically meaningful thresholds to support equitable and timely integration of SPC.

**Keywords**: Patient-Reported Outcome Measures, Simultaneous Palliative Care, Quality Of Life



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# Abstract

# Caring Through Food: The Impact of Food Aesthetics on Patients' Experience in Care Settings

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**Introduction.** Visual stimuli can stimulate appetite through reward-related neural circuits even when energy requirements have already been met. However, the presentation of hospital food is generally not perceived positively by patients. The aim of this study was to investigate the effects of an intervention designed to improve food presentation in healthcare settings.

**Methods.** A single-arm pre-post observational study with a mixed-methods approach was conducted to evaluate the impact of food aesthetics on patient satisfaction, mood, palatability, dietary intake, and interaction with healthcare staff. The intervention focused on breakfast presentation without modifying food quality or selection and was implemented in three settings: nursing homes, Oncology, and Hospice. Data were collected using the Fluid and Food Estimation Diagram (FFED), a questionnaire, and a semi-structured interview.

**Results.** Thirty-four participants were enrolled, with a mean age of 77 years; 68% were female. Wilcoxon and McNemar tests showed statistically significant improvements in satisfaction, mood, and palatability, while no significant differences emerged in interaction with healthcare staff. Dietary intake measured using the FFED showed a reduction in caloric intake during the intervention compared with baseline, although the difference was not statistically significant. Qualitative analysis identified an increase in positive emotions associated with the intervention.

**Discussion.** Interventions targeting food presentation may enhance patient experience and perceived quality of care, with the greatest benefits observed for mood-related outcomes. Although no significant effect on caloric intake was identified, the overall findings support the integration of aesthetic strategies into healthcare food services and encourage further research in this area.

**Keywords:** Food Aesthetics, Patient Satisfaction, Mood



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# Abstract

# From Late Access to Early Identification: A Community Nursing Model for Activation of the Palliative Care Network

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**Citation:** Codevilla, S., Vanni, C., Zineddu, L., & Capelli, C. (2026). From late access to early identification: A community nursing model for activation of the palliative care network. *International Journal of Health Supplements*, 1(Suppl. 2), 203. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Late access to palliative care networks represents a significant issue in community settings, often due to the lack of a structured process for the early identification and referral of palliative care needs. This delay compromises the timeliness of care and the overall quality of assistance. In this context, the nursing role is strategic but remains underutilized.

**Methods.** A community-based organizational model was developed and formalized through the integration of validated tools for the early identification of palliative care needs (NECPAL) and the assessment of care complexity (IDC-PAL). The model defines a structured pathway encompassing identification of needs, referral, assessment, and care provision, and was formalized through an organizational procedure and specific operational instructions.

**Results.** The model made the process of accessing the palliative care network explicit, increasing entry points and improving integration among healthcare professionals. It also defined an active role for nurses in the early identification and referral of patients with palliative care needs, with the potential to improve the timeliness of care.

**Discussion.** The introduction of a structured access model represents a key strategy for overcoming delays in palliative care activation. Strengthening the nursing role enables earlier identification of care needs in community settings and may improve continuity and quality of care. The proposed model is potentially replicable in other healthcare settings.

**Keywords**: Palliative Care, Early Identification, Community Nursing



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Development and Adoption of Competency Profiles in a Hematology-Oncology Department: Enhancing Specialist Competencies for the Safety and Effectiveness of Care Processes

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**Citation:** Filice, M. R., Cuboni, A., Roberti, A., Maddalo, C., Napolitano, F., Ulivieri, D., & Cavaliere, B. (2026). Development and adoption of competency profiles in a hematology-oncology department: Enhancing specialist competencies for the safety and effectiveness of care processes. *International Journal of Health Supplements*, 1(Suppl. 2), 204–205. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** The increasing clinical complexity of hematology-oncology care requires organizational models based on clearly defined roles and specialized competencies to ensure quality and procedural safety. Competency profiles are strategic professional governance tools that define responsibilities, activities, and required competencies for each healthcare professional. The aim of this project was to describe the development and implementation of competency profiles within a hematology-oncology department, with the purpose of standardizing role descriptions, enhancing specialist competencies, and improving the safety and effectiveness of clinical care processes.

**Methods.** A descriptive project report was conducted between 2023 and 2024 through five phases: context analysis, competency mapping, profile development, validation, and adoption. Competency mapping was based on the professional profiles of the healthcare professions and on the Dreyfus-Benner framework for professional development. Each competency profile was formalized as an Operational Instruction and published on the institutional platform used to consult procedures, guidelines, and organizational documents.

**Results.** Thirteen competency profiles were developed for nurses, physiotherapists, and radiology technologists. The coded system improved document traceability and standardization. Professionals reported greater role clarity, stronger interprofessional integration, and improved alignment between

competencies and operational needs, contributing to increased safety across care processes.

**Discussion.** This experience demonstrates how structured and shared competency profiles can support patient safety, professional accountability, and organizational quality by reducing procedural variability. The model may be transferable to other healthcare settings and promotes a competency-based organizational culture as a strategic value for the healthcare system.

**Keywords**: Competency Profiles, Hematology-Oncology, Procedural Safety



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Organizational Innovation and Clinical Outcomes: The Case Manager's Contribution to Personal Care

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**Introduction.** In oncology, the increasing complexity of treatment pathways requires high levels of coordination and continuity of care. In this context, the case manager represents an important organizational innovation that may improve treatment adherence, patient experience, and clinical outcomes while reducing fragmentation and optimizing healthcare resources. Particular relevance is given to proximity-based care, which extends care beyond the hospital through integration with community healthcare services and the active involvement of general practitioners, community nurses, social workers, and other professionals. The aim of this study was to evaluate the role of the case manager in oncology pathways, with particular reference to treatment adherence, continuity of care, resource optimization, clinical outcomes, and the experience of the person receiving care.

**Methods.** A review of national and international literature on case management models in oncology was conducted. In addition, clinical cases managed during the previous three years at the integrated outpatient clinic of San Donato Hospital in Arezzo were analysed, focusing on treatment adherence, continuity of care, and use of healthcare resources.

**Results.** The implementation of the case manager role was associated with reduced fragmentation of healthcare services, improved treatment adherence, and greater patient satisfaction. Healthcare resource utilization was also optimized through improved planning and coordination of clinical and care pathways. Personalizing care according to patients' wishes, choices, and availability supported a sense of security, trust, and respect for both patients and their families or caregivers.

**Discussion.** The case manager represents a strategic lever for organizational innovation by integrating clinical, managerial, and relational competencies within person-centred oncology care. Care should not be understood as the sum of individual services, but as the development of coordinated pathways centred on the person. Strengthening transitions between hospital and community settings may improve patients' quality of life while reducing the emotional and social burden associated with cancer.

**Keywords:** Organizational Innovation, Continuity Of Care, Case Management

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Dignity in Chronic Illness: Development and Validation of the Patient Dignity Inventory for Chronic Illness (PDI-CI)

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**Citation:** Righi, L., Pallassini, M., Uvelli, A., Gualtieri, G., & Ferretti, F. (2026). Dignity in chronic illness: Development and validation of the Patient Dignity Inventory for Chronic Illness (PDI-CI). *International Journal of Health Supplements*, 1(Suppl. 2), 208–209. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Dignity is a core ethical and clinical dimension in oncology nursing and in illness trajectories characterized by high symptom burden and existential distress. The Patient Dignity Inventory (PDI), originally developed in oncology and palliative care, is widely used to assess dignity-related distress. However, its original structure may be less suitable for chronic care settings. The aim of this study was to develop and validate a version adapted to chronic illness (PDI-CI), theoretically and psychometrically consistent with the specific needs of these patients.

**Methods.** A psychometric validation study was conducted between June 2024 and May 2025 involving 240 adults with chronic conditions. The 11-item PDI-CI was administered together with the Psychological Well-Being Scale (PWBS-42) to assess convergent validity. A subgroup completed the questionnaire again after two weeks to evaluate test-retest reliability. Analyses included Rasch modelling, targeting, internal consistency using the Person Separation Index (PSI) and Cronbach's alpha, test-retest reliability, and Differential Item Functioning (DIF) by age and gender.

**Results.** Rasch analysis showed good model fit and adequate targeting to the sample's level of distress. Items performed consistently with the theoretical construct. Internal consistency was high (PSI = 0.83; $\alpha = 0.93$), and test-retest reliability was excellent ($\rho = 0.904$; $p < 0.001$). Convergent validity showed significant correlations in the expected direction, indicating that greater dignity-related distress was associated with poorer psychological well-being. DIF analyses showed no clinically relevant bias by age or gender.

**Discussion.** The PDI-CI is a brief, reliable, and psychometrically robust instrument for assessing dignity in chronic illness. Its use may support the early identification of existential needs and enable personalized nursing interventions. Its applicability within oncology care pathways, which are increasingly characterized by chronic disease trajectories, represents a relevant area for future research.

**Keywords:** Dignity, Chronic Illness, Psychometric Validation

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Prevention of Chemotherapy-Induced Alopecia Through Scalp Cooling: Experience from an Oncology Day Hospital

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**Citation:** Fratarcangeli, C., Polloni, A., Migliorucci, R., Righi, L., & Tonelli, C. (2026). Prevention of chemotherapy-induced alopecia through scalp cooling: Experience from an oncology day hospital. *International Journal of Health Supplements*, 1(Suppl. 2), 210–211. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Chemotherapy-induced alopecia is one of the most distressing adverse effects experienced by oncology patients and may significantly affect body image, psychological well-being, and adaptation to illness. Paxman Scalp Cooling, through scalp vasoconstriction and reduced follicular metabolism, may represent an effective strategy for preventing this adverse event. The aim of this study was to evaluate the effectiveness and tolerability of scalp cooling in patients undergoing chemotherapy.

**Methods.** A retrospective internal observational analysis was conducted between November 30, 2023, and November 30, 2025, involving 26 adult patients with solid tumours. Routine clinical data included pre-treatment nursing assessment, counselling, and classification of alopecia as absent, ≤50%, patchy, or complete. Chemotherapy regimens included taxanes, platinum-based agents, cyclophosphamide, and anthracyclines. Treatment success was defined as hair loss ≤50%.

**Results.** Among the 26 patients, 16.7% experienced no alopecia, 44.4% hair loss ≤50%, 33.4% patchy alopecia, and 5.5% complete alopecia. The success rate among evaluable patients was 61.1%, decreasing to 42.3% in the intention-to-treat analysis because of a discontinuation rate of 30.8%. Discontinuation was mainly related to cooling discomfort, headache, and cervical pain. In most patients, alopecia remained mild to moderate.

**Discussion.** Paxman Scalp Cooling appears to be an effective and overall tolerable strategy for preventing chemotherapy-induced alopecia. Nursing assessment, standardized monitoring, adherence support, and targeted interventions to reduce discomfort are key components for optimizing the care pathway. Prospective studies using formalized protocols are needed to strengthen these findings.

**Keywords**: Chemotherapy-Induced Alopecia, Scalp Cooling, Oncology Nursing

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Proper Management of PICCs and Port-a-Caths: From Scientific Evidence to Clinical Practice. The Experience of the "S. Maria" Hospital of Terni

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**Introduction.** Venous access devices are essential for the treatment of hospitalized patients but may be associated with complications related to either insertion or subsequent management. These complications are particularly relevant for central venous access devices, whose risks may vary according to device type. In oncology, Peripherally Inserted Central Catheters (PICCs) and Port-a-Caths are widely used and require specific nursing competencies. As expertise in their management is often concentrated within oncology settings, ensuring appropriate management across other hospital units is essential. The aim of this study was to describe the experience of the "S. Maria" Hospital of Terni in implementing a programme designed to optimize nursing management of implantable venous access devices.

**Methods.** A descriptive observational study was conducted to evaluate the implementation of a blended training programme. The course included four hours of classroom-based training and one hour of field-based training. Faculty included oncology nurses and professionals from the Vascular Access Nurse programme. The educational event was accredited for 7.5 Continuing Medical Education credits.

**Results.** Two editions of the programme were completed, involving 32 participants. Learning was evaluated through multiple-choice questions and a practical assessment conducted in the Oncology Day Hospital under qualified supervision. On a five-point Likert scale, 87% of participants rated the course as highly relevant, 74% rated its quality as excellent, and 81% rated it as highly useful.

**Discussion.** Increasing clinical complexity, chronicity, and the expansion of oncology and infusion treatments require advanced competencies and structured organizational strategies to ensure patient safety, continuity of treatment, and reduction of complications. Training in the management of implantable venous access devices should therefore be integrated into broader institutional programmes including surveillance, clinical audits, bundles, and checklists. Given the interest

generated by the initiative, further editions are planned, extending participation to physicians and midwives.

**Keywords**: PICC, Port-A-Cath, Evidence-Based Nursing



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## Abstract

# Soft Skills and Emotional Intelligence in Oncology Nursing

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**Citation:** Filice, M. R., Cuboni, A., Roberti, A., Ulivieri, D., & Cavaliere, B. (2026). Soft skills and emotional intelligence in oncology nursing. International Journal of Health Supplements, 1(Suppl. 2), 214. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Oncology nursing is situated within a care context characterized by high clinical and emotional complexity, where nurses are daily involved in managing patients' suffering, communicating critical information, and providing support to patients and their families. In this scenario, soft skills and emotional intelligence represent essential competencies to ensure an effective therapeutic relationship and to support nurses' professional well-being. Although the literature acknowledges their importance, the lived experiences of oncology nurses and the meanings they attribute to these competencies remain insufficiently explored, particularly through qualitative approaches.

**Methods.** This is an observational, exploratory-descriptive qualitative study conducted through individual semi-structured interviews. Participants are nurses with at least one year of experience in oncology settings, working across different care contexts. Interviews, lasting 45-60 minutes, are audio-recorded after obtaining informed consent, transcribed verbatim, and analyzed using thematic analysis according to Braun and Clarke. Purposive sampling is adopted and guided by the principle of data saturation.

**Results.** The study is currently ongoing. Preliminary findings indicate the emergence of themes related to the central role of soft skills in the therapeutic relationship, the management of nurses' own emotions and those of patients, the emotional impact of oncology practice, and the use of individual coping strategies. A perceived need for structured education and training in emotional and relational competencies also emerges.

**Discussion.** Preliminary results suggest that soft skills and emotional intelligence are key elements of oncology nursing practice, influencing both the quality of care and nurses' well-being. This study may provide valuable insights for the development of targeted educational interventions and organizational strategies aimed at supporting nurses' emotional competencies. Further analysis will allow a deeper understanding of the contribution of these skills to clinical practice and may inform future research directions.

**Keywords:** Oncology Nursing, Soft Skills, Emotional Intelligence



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# Abstract

# Integration of Nursing Clinical Research and Organizational Research: The Role of Leadership in Nursing Directorates

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**Introduction.** Nursing clinical research, focused on evidence-based practices to optimize direct patient care, must integrate with organizational research to address the complexities of modern healthcare systems. This synergy is crucial for enhancing service effectiveness, efficiency, and sustainability, with leadership and management playing a pivotal role in nursing directorates. This abstract aims to outline a rigorous methodological framework combining clinical and organizational research, highlighting the responsibilities of nursing directorates in promoting innovation, accountability, and care quality.

**Methods.** A mixed-methods approach (qualitative-quantitative) integrated a systematic literature review (PRISMA guidelines) of nursing clinical studies (n=45, 2015-2025) with organizational analysis (Lean and Balanced Scorecard models). Case studies from Italian hospital settings (Emilia-Romagna) evaluated transformational leadership impacts on clinical outcomes (e.g., length-of-stay reduction, Delta=-15, $p<0.01$) and managerial indicators (e.g., nursing turnover, HR=0.72, 95% CI 0.58-0.89). Tools included semi-structured interviews (n=30 leaders) and multivariate regression analysis.

**Results.** Integration showed that effective leadership in nursing directorates amplifies clinical research impact by 28% (moderate effect, n2=0.14), reducing clinical errors and optimizing resources. Key responsibilities encompass: (i) evidence-based budget allocation; (ii) continuous training; (iii) KPI monitoring (e.g., patient satisfaction, NPS>80).

**Discussion.** The convergence of nursing clinical and organizational research, underpinned by responsible leadership, positions nursing directorates as catalysts for healthcare excellence. Hybrid protocols for policy-making are recommended, alongside future randomized trials for causal validation.

**Keywords:** Nursing Research, Healthcare Leadership, Organizational Management



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## Abstract

# Nursing Therapeutic Education for Home Management of 5-FU via an Elastomeric Infusion Device: Development and Validation of Operational Tools

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**Introduction.** The growing use of home chemotherapy with 5-fluorouracil (5-FU) administered by continuous infusion through an elastomeric infusion device has improved the quality of life of patients with cancer, but has also transferred part of therapeutic management to the home, increasing the need for structured education for patients and caregivers. In the absence of structured pathways specifically focused on home management, correct use of the device may be challenging, with potential risks to patient safety and the appropriateness of access to healthcare services. The aim of this study was to design and validate operational, organizational, and care tools aimed at facilitating home self-management of 5-FU, enhancing patient safety, and standardizing the educational process.

**Methods.** The study was developed as part of a quality-improvement project at the Local Health Authority of Piacenza and included analysis of the clinical care context, review of the literature and relevant regulations, and identification of the educational needs of patients and caregivers. Based on this evidence, two integrated tools were developed to improve understanding of the therapy, early recognition of complications, and correct management of the elastomeric infusion device at home. The entire methodological process was validated by the multidisciplinary oncology team.

**Results.** An easy-to-read information brochure accompanied by multimedia support accessible through a QR code and an operational instruction for healthcare professionals were developed. The introduction of these tools is expected to promote patient and caregiver empowerment, improve consistency of communication among healthcare professionals, and contribute to reducing

inappropriate access to emergency and urgent care services.

**Discussion.** Standardization of nursing therapeutic education represents a strategic approach to improving the safety of patients with cancer receiving home treatment with 5-FU. The developed model is applicable to clinical practice and potentially replicable in other oncology settings. Further studies are needed to evaluate its impact on process and outcome indicators.

**Keywords**: Home Chemotherapy, 5-Fluorouracil (5-FU), Nursing Therapeutic Education



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## Abstract

# Adapted Physical Activity in Oncology: The Nursing Role in a Dedicated Care Model with Potential Multicenter Application

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**Introduction.** Adapted physical activity (APA) is recognized as an effective intervention to improve quality of life and counteract the side effects of cancer therapies. However, the lack of specialized facilities and adherence barriers often limit patient participation. This study aimed to evaluate the psychophysical effects of a structured APA program conducted in the "Palestra Oncologica" at Foligno Hospital, describe the nursing contribution to its implementation, and explore the potential transferability of the model to multicenter settings.

**Methods.** A prospective observational study was conducted on 15 adult patients with an oncological diagnosis (mean age approximately 60 years). The 8–12-week protocol included aerobic, muscle-strengthening, and mobility exercises. Nursing staff participated in reception, functional assessment, therapeutic education, and clinical monitoring. Pre- and post-intervention assessments included the Six-Minute Walk Test (6MWT), Chair Stand Test (CSST), Timed Up and Go (TUG), FACIT-Fatigue, and EORTC QLQ-C30.

**Results.** All participants completed the program without drop-outs. Improvements were observed in muscle strength (+27% in CSST), endurance (+10% in 6MWT), agility, and perceived fatigue, with a 40% improvement in the FACIT-Fatigue score. Participants also reported improved overall health status. Nursing integration supported adherence and the safe management of potential clinical criticalities.

**Discussion.** APA delivered in a dedicated oncology setting with active nursing support appears feasible and associated with improvements in physical performance, fatigue, and perceived health status. The nursing role may contribute to patient safety, therapeutic education, empowerment, and adherence. The standardized structure of the intervention and assessment tools supports its potential application in future multicenter studies.

**Keywords:** Adapted Physical Activity, Oncology Nursing, Cancer-Related Fatigue



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## Abstract

# Informal Peer Support Network for Oncology Nursing Research: From Training Experience to Initial Mentoring Services

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**Introduction**. The integration of scientific evidence into nursing practice relies on robust disciplinary research. In peripheral territories with limited access to nursing research doctoral programmes, developing innovative training models and peer-to-peer support networks represents a valuable opportunity. In 2025, oncology research methodology workshops were launched, revealing the need for a structured peer-support network. This study aimed to describe the development and initial activities of an informal oncology nursing research support network, created from the needs expressed by workshop participants.

**Methods.** During the second workshop, held in December 2025, an anonymous questionnaire was administered to participating nurses (n = 110) to explore perceived barriers across the research process, including protocol drafting, ethics committee submission, data collection, statistical analysis, and publication. Based on the results, an email-based advisory service was activated in 2026, connecting applicants with nurse researchers, biostatisticians, and professionals experienced in ethical and administrative procedures.

**Results.** The questionnaire identified major barriers in protocol writing (72%), ethics committee submission (88%), questionnaire administration (61%), data analysis (95%), manuscript drafting (80%), and securing publication funding (97%). In early 2026, the network received its first support requests for research protocol development from workshop participants, leading to the activation of tailored methodological and organisational mentoring. Additional training activities on scientific writing, basic statistics, and the ethical use of artificial intelligence in clinical research were also planned.

**Discussion.** This experience demonstrates how targeted training can evolve into an informal nursing research support network that complements the work of national scientific societies. The findings also reveal a clear demand for bottom-up territorial groups capable of building integrated networks with local organisations and promoting proximity, collaboration, and professional autonomy in oncology nursing. Formalising the model and standardising mentoring procedures represent the next steps towards sustainability and scalability.

**Keywords:** Oncology Nursing Research, Peer Support, Professional Development, Research

Mentorship



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## Abstract

# The Use of Artificial Intelligence Tools in Nuclear Medicine to Promote Patient Communication, Education, and Compliance

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**Introduction.** Within the Nuclear Medicine (NM) Department at San Raffaele Hospital, strategies are being explored to improve patient education and adherence to radiometabolic therapies. Chatbots and large language models may support routine clinical workflows and deliver clearer, patient-centered information, but evidence specific to NM remains fragmented. This review aimed to examine AI-based chatbots for patient education and procedural communication and to inform the development of a chatbot for patients undergoing diagnostic and therapeutic NM procedures.

**Methods.** PubMed and CINAHL were searched for original English-language articles published up to January 15, 2026. Reference lists were also screened. Reviews, meta-analyses, editorials, and letters were excluded. Two authors independently screened titles and abstracts and resolved disagreements by consensus. Data on aims, designs, outcomes, AI tools, and assessment methods were extracted and synthesized narratively using descriptive statistics.

**Results.** Twenty-three records were identified and seven met the inclusion criteria. Studies were heterogeneous in design and outcomes, addressing the readability of online educational materials, AI-generated responses from ChatGPT-4, Gemini, and Google Bard, and chatbot-based information for NM procedures. Only 5% of 99 educational materials assessed by Hansberry et al. met the NIH/AMA-recommended reading level; the remaining materials averaged grade 11.8. Rogash et al. found that ChatGPT responses to 13 questions on [$^{18}$F]FDG PET/CT were appropriate in 92% and useful in 96% of cases; inconsistencies occurred in 16%, while 83% of responses to sensitive questions were rated as empathetic. Other studies reported acceptable DISCERN reliability but consistently high reading levels. Human and AI-based ratings showed significant inter-rater correlations ($p < .01$).

**Discussion.** AI-based tools may support patient communication, education, and engagement in NM. Clinical implementation nevertheless requires rigorous validation, alignment with evidence-based guidance, and safeguards against misinformation and overreliance. Future studies should evaluate real-world feasibility, clinical impact, and patient outcomes.

**Keywords:** Digital Health, Patient Engagement, Nuclear Medicine, Patient Education, Digital Tools,

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## Abstract

# The Role of the Oncology Pivot Nurse: The Care Relationship and Responsibilities Across the Patient Care Pathway

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**Citation:** Rogante, L., Marcelli, S., Marinelli, V., D'Angelo, G., Costantini, G., & Baglioni, I. (2026). The role of the oncology pivot nurse: The care relationship and responsibilities across the patient care pathway. *International Journal of Health Supplements*, 1(Suppl. 2), 224–225. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. The complexity of oncology care pathways requires specialized professionals capable of coordinating care and supporting patients throughout the therapeutic process. One such professional is the oncology pivot nurse, whose role is to ensure continuity of care, improve communication between patients and clinical teams, and increase patient satisfaction. However, important gaps remain in understanding the actual impact of this role compared with traditional care models. This review aimed to analyze the role and responsibilities of the oncology pivot nurse and assess its impact on quality of care, patient satisfaction, and continuity of care.

**Methods.** A review of the scientific literature was conducted in PubMed between July and September 2025. Articles published from 2015 to 2025 in English or Italian were considered. Quantitative and qualitative studies and systematic reviews examining care provided by pivot nurses or nurse navigators in hospital and community oncology settings were included. The reviewed articles addressed care pathways for patients with different types of cancer, including breast, lung, and colorectal cancer.

**Results.** The evidence indicated that the involvement of a pivot nurse was associated with improvements in the care experience, treatment adherence, timely initiation of therapy, and continuity of care. The reviewed studies reported reductions in stress from 5.1% to 2.7%, anxiety from 7.8% to 5.1%, and depression from 4.4% to 2.2%. Patient satisfaction reached approximately 97%, while the time from diagnosis to treatment decreased from 42.93 to 15.15 days. Pivot nurses also provided necessary information, coordinated care among healthcare professionals, and offered emotional support. Informational support represented 44% of the reported interventions, while care coordination accounted for 35%.

**Discussion.** The findings suggest that the oncology pivot nurse may improve patient satisfaction, communication among healthcare professionals, and the overall efficiency of the care pathway.

Integrating this role into Italian oncology care pathways appears important for strengthening continuity and patient-centeredness. Further studies are needed to evaluate its effectiveness and organizational sustainability within the Italian healthcare system.

**Keywords**: Pivot Nurse, General Nurse, Cancer Care, Care Relationship, Quality of Care, Patient Satisfaction



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## Abstract

# From Transition Clinic to Nursing Leadership: Adapting an Evidence-Based Model from Congenital Heart Disease to Oncology

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**Citation:** Flocco, S. F., Campioni, G., Nedesca, R.-B., Coti Zelati, D., Chessa, M., & Magon, A. (2026). From transition clinic to nursing leadership: Adapting an evidence-based model from congenital heart disease to oncology. *International Journal of Health Supplements*, 1(Suppl. 2), 226–227. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. Standardized educational and multidisciplinary support interventions delivered through a Transition Clinic (TC) represent a key component in the management of patients with congenital heart disease (CHD) during the transition from pediatric to adult care. Although CHD-specific TC models are increasingly implemented, empirical evidence and transferable guidance for their application in other clinical settings, including oncology, remain limited. This work aimed to describe the evidence-based TC model developed at IRCCS Policlinico San Donato and conceptually assess its adaptability to oncology, identifying transferable components and context-specific modifications, with particular attention to continuity of care, empowerment, and self-management.

**Methods.** The CHD-specific TC model comprises three principal components: personalized education for patients and families concerning the clinical condition; educational interventions, psychological support, and peer counselling aimed at promoting empowerment and self-management; and multidisciplinary coordination led by a Transition Coordinator who facilitates communication among patients, families, and healthcare professionals. A qualitative, exploratory conceptual analysis was conducted to examine the model's adaptability to oncology, considering organizational context, multidisciplinarity, patient empowerment, self-management, and continuity of care. Potential adaptations were evaluated on the basis of experience with the CHD model and the international literature.

**Results.** The analysis identified three potentially transferable components: structured patient and family education, integrated psychological and peer support, and multidisciplinary care coordination. It also highlighted the need for context-specific adaptations reflecting the organizational and clinical characteristics of oncology pathways. These findings supported the formulation of preliminary

principles for developing a patient-centered oncology Transition Clinic.

**Discussion.** The CHD-specific TC model provides a conceptual framework for designing structured transition pathways in oncology. Its adaptation may strengthen continuity of care, patient empowerment, self-management, and nursing leadership. Subsequent implementation studies will be required to evaluate the model's feasibility, effectiveness, and organizational sustainability in oncology settings.

**Keywords**: Transition Clinic, Advanced Nursing, Oncology, Empowerment, Continuity of Care, Self-Management



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Safety of the Antineoplastic Drug Process and the Nurse's Role in the Antineoplastic Drugs Unit

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**Introduction.** Handling antineoplastic drugs is a highly complex and high-risk process requiring structured error-prevention barriers, traceability, and rigorous control of each operational phase. The Antineoplastic Drugs Unit represents a critical component of the therapeutic pathway because inconsistencies in prescribing, compounding, or distribution may result in potential patient harm and treatment delays. This study aimed to describe how specialist nursing competencies and multidisciplinary collaboration contribute to the safety of the antineoplastic drug process.

**Methods.** A descriptive organizational and process study was conducted in a high-volume service delivering approximately 30,000 preparations annually through two dedicated units. The model was based on operational integration among nurses, pharmacists, and oncologists. The workflow included electronic prescribing with safety alerts, prescription validation, and digital traceability of preparations. Nursing activities comprised initial verification of prescriptions and materials, aseptic compounding using closed-system transfer devices, documented double-checking supported by digital tools, controlled management of residual products, and final reconciliation with the pharmacist before distribution. The quality system included on-the-job training, periodic audits, microbiological monitoring, and annual media-fill simulations.

**Results.** The organizational model, based on multiple controls and digital traceability, supported the timely identification of inconsistencies involving prescriptions, dilutions, and compounding phases, thereby strengthening safety barriers. Standardization of critical steps and documented double-checking performed by dedicated nurses supported error prevention and process consistency. Structured review of procedures facilitated the identification of recurring critical issues and informed updates to procedures and training pathways.

**Discussion.** Although operating predominantly without direct patient contact, nurses working in the Antineoplastic Drugs Unit play a pivotal role in governing the therapeutic process and safeguarding medication safety. They ensure procedural adherence and the integrity of verification processes. Collaboration with pharmacists and oncologists, combined with continuous training, strengthens specialist competencies and promotes a shared culture of risk management.

**Keywords**: Antineoplastic Drug Preparation, Medication Safety, Traceability, Near Miss, Risk Management, Oncology Nursing

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Impact of an End-to-End Procedure on Extravasation Events During Intravenous Chemotherapy

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**Citation:** Lo Cascio, A., Albegiani, G., Santonocito, S., Intravaia, G., Mercadante, C., & Denaro, R. (2026). Impact of an end-to-end procedure on extravasation events during intravenous chemotherapy. *International Journal of Health Supplements,* 1(Suppl. 2), 230–231. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** The cancer burden is increasing, and intravenous chemotherapy remains a cornerstone of cancer treatment. Extravasation or infiltration of antineoplastic drugs is a potentially preventable adverse event associated with pain, tissue injury, treatment delays, and reduced quality of life. Nevertheless, gaps persist in the traceability of the drug pathway and in the standardisation of safety checks from preparation to administration. This study assessed the impact of implementing an end-to-end monitoring procedure on the number and severity of recorded events, highlighting the contribution of nursing surveillance at critical stages of the process.

**Methods.** This retrospective pre–post study analysed consecutive records of extravasation or infiltration events collected between 2022 and 2025 at an Italian cancer centre. Two periods were compared: 2022–2023, before implementation of the procedure, and 2024–2025, following the introduction of end-to-end monitoring from drug preparation to administration. Outcomes included the number of events recorded in each period, the estimated extravasated volume, and the documentation of nursing safety procedures, patient education, and vein integrity assessment.

**Results.** Fifteen events were analysed. The number of recorded events decreased from nine in 2022–2023 to six in 2024–2025, corresponding to a 33% reduction. During the pre-implementation period, the estimated extravasated volume ranged from 0.5 to 25 mL, and two of the nine events exceeded 5 mL. In the post-implementation period, volume data were available for four of the six events; the recorded volume ranged from 4 to 5 mL, with no events exceeding 5 mL. Patient education was documented in 88.9% of cases before implementation and in 100% after implementation. Vein integrity assessment was documented in all cases during both periods.

**Discussion.** Following implementation of the end-to-end procedure, fewer extravasation or infiltration events were recorded, and their severity appeared to decrease, suggesting earlier detection and more timely management. These findings emphasise the central role of nurses in monitoring the process and ensuring patient safety. However, the absence of data on the total number of intravenous infusions prevented the estimation of incidence rates and limited causal inference. Future prospective studies should report events per 1,000 infusions and adopt standardised monitoring indicators.

**Keywords**: Oncology Nursing, Patient Safety, Extravasation, Traceability, Monitoring, Intravenous Chemotherapy



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Impact of Peripherally Inserted Central Catheters on Pain and Quality of Life in Patients With Cancer

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**Introduction.** Peripherally inserted central catheters (PICCs) are widely used in oncology care pathways because they provide reliable venous access, support treatment continuity, and promote the appropriateness of care. Evaluating their impact on patient-reported outcomes, particularly pain and quality of life, requires standardised measures administered at clinically meaningful stages of the care pathway. This study aimed to evaluate changes in pain and quality of life among adult patients with cancer between the day of PICC insertion and the day of catheter removal.

**Methods.** An observational study with a repeated-measures design was conducted among adult oncology patients undergoing PICC placement. Sociodemographic and clinical characteristics were collected, including age, sex, and tumour site. Quality of life was assessed using the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30), administered on the day of catheter insertion and on the day of catheter removal. Scores were transformed to a 0–100 scale according to the EORTC scoring manual. Differences between the two timepoints were analysed using paired statistical tests.

**Results.** A total of 48 patients were included, with a mean age of 67.6 years (SD = 10.4); most participants were male. The most frequently represented tumour sites were lung, urogenital, and colorectal cancers. Paired comparisons showed statistically significant improvements in the main patient-reported outcomes between catheter insertion and removal. Physical functioning improved by 33.3 points ($p < 0.001$), as did emotional functioning (mean difference = +33.3; $p < 0.001$). Pain decreased significantly while the device remained in situ (mean difference = −33.3; $p < 0.001$). Overall, improvements were observed in both functional and symptom domains.

**Discussion.** Comparison between the two assessment timepoints showed a significant reduction in patients' psychophysical burden, particularly in the domains of physical functioning, emotional functioning, and pain. These findings support the routine use of standardised measures of quality

of life and pain to monitor patient-reported outcomes throughout the venous access management pathway and guide targeted care interventions. Nevertheless, the observational design does not allow the observed changes to be attributed exclusively to the presence of the catheter.

**Keywords**: Peripherally Inserted Central Catheter, Oncology Nursing, Quality of Life, Pain, Patient-Reported Outcomes, Patient-Reported Experiences



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Ethical and Organizational Factors Related to Oncology Nurses' Intention to Leave: Preliminary Results of a Descriptive Correlational Study

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**Introduction.** Oncology nurses work in complex care environments characterised by substantial emotional demands and recurrent ethical dilemmas. These conditions may increase moral distress and compassion fatigue, weaken organizational commitment, and heighten intention to leave. Although a positive ethical climate may serve as a protective factor, the relationships among moral distress, compassion fatigue, organizational commitment, perceived ethical climate, and intention to leave remain insufficiently investigated. This study aimed to assess these factors among oncology nurses and examine their associations with intention to leave.

**Methods.** A descriptive correlational study was conducted at an Italian oncology research hospital. Data were collected through an online questionnaire administered using REDCap. The questionnaire included sociodemographic and occupational characteristics and measures of intention to leave. Validated instruments included the Moral Distress Scale-Revised (MDS-R), Professional Quality of Life Scale (ProQOL), Organizational Commitment Questionnaire-Revised (OCQ-R), and Hospital Ethical Climate Survey (HECS). Data were analysed using descriptive and correlational statistics.

**Results.** Of the 180 nurses invited to participate, 109 completed the questionnaire, corresponding to a response rate of 60.5%. The sample was predominantly female, with a mean age of 42 years (SD = 12) and a mean professional experience of 11 years (SD = 10). Overall, 83.5% of participants did not intend to change unit, whereas 5.5% intended to do so within six months and 11.0% within one year. Similarly, 79.8% did not intend to leave the organization, while 4.6% intended to leave within six months and 15.6% within one year. An intention to leave the nursing profession was reported by 9.2% of participants. Mean satisfaction scores for the current role, nursing profession, and work team were 2.98, 2.98, and 2.74, respectively, on a 1–4 scale. Mean scores were 50 (SD = 45) for moral distress, 62 (SD = 40) for compassion fatigue, 34 (SD = 24) for organizational commitment, and 34 (SD = 25) for perceived ethical climate. Inferential analyses will be presented at the conference.

**Discussion.** Preliminary findings indicate moderate levels of moral distress and compassion fatigue, moderate job satisfaction, and a relatively low intention to leave the nursing profession. Targeted interventions aimed at strengthening the ethical climate and providing organizational and psychological

support may help reduce professional distress and reinforce organizational commitment, thereby supporting staff retention and quality of care. The interpretation of these preliminary findings should be completed following analysis of the associations among the investigated variables.

**Keywords**: Cancer Nursing, Intention to Leave, Moral Distress, Compassion Fatigue, Organizational Commitment, Ethical Climate



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Self-Care in Patients Undergoing Hematopoietic Stem Cell Transplantation: A Scoping Review

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**Introduction.** Hematopoietic stem cell transplantation (HSCT) is a therapeutic procedure used for patients with onco-haematological diseases and involves the replacement and reconstitution of bone marrow haematopoiesis. Owing to its complexity, HSCT may be associated with multiple complications, making patient education and the promotion of effective self-care behaviours essential components of care. This review aimed to map educational interventions for patients undergoing HSCT, identify the healthcare professionals involved in their delivery, and describe the outcomes associated with these interventions.

**Methods.** A scoping review was conducted in accordance with the Joanna Briggs Institute methodology. Potentially relevant studies were identified through searches of PubMed, Scopus, CINAHL, Embase, the Cochrane Library, SciELO, and Web of Science. The search strategy was structured according to the Population, Concept, and Context framework. Studies addressing educational interventions and self-care among patients undergoing HSCT were considered for inclusion.

**Results.** Thirteen articles met the inclusion criteria. The educational interventions addressed several self-care domains relevant to patients undergoing HSCT, particularly oral mucositis management, infection prevention, and nutrition. Nurses emerged as central professionals in delivering education and supporting patients throughout the self-care process.

**Discussion.** The available evidence suggests that educational interventions may contribute to greater patient satisfaction, improved quality of life, and favourable clinical outcomes, including fewer infectious events and better management of treatment-related complications. Nurses play a pivotal role in supporting patients' self-care abilities throughout the transplantation pathway. These findings highlight the importance of structured educational interventions tailored to the specific needs of patients undergoing HSCT.

**Keywords:** Hematopoietic Stem Cell Transplantation, Patient Education, Self-Care, Scoping Review

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Intensive Longitudinal Monitoring of Symptom Patterns in Patients With Melanoma Treated With BRAF/MEK Inhibitors: A Pilot Study

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**Introduction.** Melanoma represents a major public health challenge. Despite significant therapeutic advances associated with BRAF and MEK inhibitors, patients may experience a complex and dynamic symptom burden. Conventional clinical assessments provide a static perspective and may fail to capture intra- and inter-daily symptom fluctuations. Patient-reported outcomes, particularly the Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE), enable the patient's perspective to be incorporated into symptom assessment. However, their application within intensive longitudinal designs remains limited. This pilot study aims to characterise temporal symptom patterns among patients with melanoma receiving BRAF/MEK inhibitors and explore their associations with daily activity interference and self-care behaviours.

**Methods.** This intensive longitudinal pilot study will be conducted at the Oncology Day Hospital of IDI-IRCCS. Approximately 165 patients with melanoma receiving BRAF/MEK inhibitors will be enrolled and stratified into three cohorts according to treatment phase: treatment initiation, consolidation phase of at least three months, and advanced phase of at least six months. Participants will complete a PRO-CTCAE-based symptom diary twice daily, in the morning and evening, for three weeks. Sociodemographic, clinical, and symptom-related data will be collected. Descriptive and exploratory

analyses will focus on intra-individual variability and temporal symptom patterns.

**Results.** The study is expected to characterise intra- and inter-daily symptom fluctuations and identify dynamic and recurrent symptom patterns across treatment phases. Symptom interference with daily activities and its association with self-care behaviours will also be explored, with potential implications for treatment adherence and early symptom management.

**Discussion.** Intensive symptom monitoring represents an innovative and patient-centred approach to understanding the symptom experience of patients with melanoma. Findings from this pilot study may inform the development of targeted nursing interventions, facilitate the early identification of clinically relevant changes, and support personalised symptom management throughout the treatment pathway.

**Keywords**: Melanoma, BRAF/MEK Inhibitors, Patient-Reported Outcomes, PRO-CTCAE, Intensive Longitudinal Study



**Funding:** This research received no external funding. **Conflict of Interest:** Rosario Caruso is President and Arianna Magon is Vice President of the Italian Association of Oncology Nurses (AIIAO). Maddalena De Maria served as a member of the Scientific Committee of the AIIAO 2026 Congress. The remaining authors declare no conflicts of interest.

## Abstract

# Value Health System and People Management: Enhancing Human Capital and the Visibility of Nursing's Contribution

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**Introduction.** The Value Health System paradigm requires moving beyond an approach primarily focused on volumes of activity and orienting the assessment of healthcare systems towards outcomes, quality, appropriateness, and sustainability. From this perspective, nursing care makes an essential contribution that is not always adequately represented within measurement and reporting systems. People management also assumes a strategic role because the value generated in care settings largely depends on the quality of professional relationships, organizational resilience, and the ability to develop skills and sustain motivation. This conceptual contribution aimed to explore the relationship between value creation and human capital management in healthcare organizations, with particular attention to attracting, motivating, and retaining nurses and other healthcare professionals.

**Methods.** A conceptual analysis was conducted considering the contemporary post-pandemic, economic, geopolitical, and societal context. The analysis examined healthcare governance models, managerial culture, professional relationships, intergenerational dynamics, human capital development, and the visibility of nursing care within a Value Health System framework.

**Results.** The analysis highlighted the need to interpret healthcare not merely as a technical and productive system, but as a complex relational environment in which professionals collaborate to care for individuals with unique needs and experiences. Accordingly, value cannot be reduced exclusively to economic performance or productivity indicators but should also encompass communicative, relational, ethical, and organizational dimensions. Particular attention was given to intergenerational coexistence in the workplace, the need to overcome professional silos, and the promotion of participatory leadership based on listening, recognition, accountability, and professional development. Shared educational pathways involving nurses, physicians, and other healthcare professionals were identified as essential for strengthening interprofessional culture and mutual understanding of professional competencies. A kind and diplomatic management approach was proposed to address organizational complexity by combining decisiveness with relational humility.

**Discussion.** A Value Health System requires structural investment in human capital. Making the contribution of nursing care visible also means recognizing that value is generated by organizations capable of integrating clinical outcomes, professional well-being, relationship quality, and competency

development. Strategic people management therefore represents a decisive lever for strengthening the resilience of healthcare services, supporting the sustainability of care systems, and ensuring full recognition of nursing's contribution.

**Keywords**: Value Health System, People Management, Human Capital, Nursing Contribution



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Ethical Leadership in Healthcare Professions: Conscience, Ethical Reasoning, and Decision-Making Responsibility in Healthcare Management

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**Introduction.** Healthcare organizations are highly complex moral environments in which organizational decisions cannot be reduced to purely technical choices but necessarily involve ethical evaluation. Despite growing international attention to ethical leadership, a gap remains in its practical application within healthcare management, particularly regarding transparent decision-making, the management of moral dilemmas, and support for professional responsibility. This contribution aimed to examine ethical leadership as an advanced competency in healthcare governance by integrating theoretical models and practical perspectives.

**Methods.** A theoretical and argumentative reflection was developed through a narrative review of national and international literature concerning ethical leadership, moral distress, moral courage, and ethical decision-making. Particular attention was given to the ethical leadership model proposed by Brown, Treviño, and Harrison, compassionate leadership and servant leadership frameworks, and contributions from clinical bioethics. The analysis was further informed by Italian organizational experiences, including ethical governance structures developed at the regional level, with specific reference to Emilia-Romagna.

**Results.** The literature indicates that ethical leadership is associated with outcomes of substantial relevance to healthcare organizations, including greater moral sensitivity, enhanced moral courage, reduced moral distress, increased organizational trust, and improved patient safety. Three core dimensions were identified: conscience as a reflective and responsible space; ethical reasoning as an advanced competency for constructing well-founded decisions; and ethical decision-making as a transparent, accountable, and justifiable process. Leadership also plays a central role in developing ethically enabling organizational environments that support professionals in recognizing and addressing complex moral dilemmas.

**Discussion.** Ethical leadership represents a strategic lever for healthcare governance by integrating professional responsibility, quality of care, and system sustainability. Leadership models grounded in relational dimensions, including compassionate and servant leadership, may promote psychological safety, dialogue, organizational trust, and quality of care. Implications for nursing practice include developing advanced ethical competencies among professionals in leadership roles and implementing organizational structures that support ethical reflection and responsible decision-making. Future research should evaluate the influence of ethical leadership on organizational, professional, and clinical outcomes across different healthcare settings.

**Keywords**: Ethical Leadership, Nursing Management, Ethical Reasoning, Ethical Decision-Making, Moral Distress, Patient Safety



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## Abstract

# Older Adults, Loneliness, and Social Isolation in Cancer: Clinical Factors and Equity Dimensions—A Rapid Review

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**Introduction.** Cancer incidence is increasing, particularly among older adults, who are also at increased risk of social isolation and loneliness. These conditions may affect health outcomes and may be shaped by inequities related to social position and living circumstances. This rapid review aimed to examine the relationship between cancer, loneliness, and social isolation among adults aged 65 years or older and to explore the relevant equity dimensions.

**Methods.** A rapid review was conducted in accordance with Cochrane guidance. PubMed, Embase, and Web of Science were searched for primary studies involving adults aged 65 years or older that examined cancer in relation to loneliness or social isolation. Extracted data included study characteristics, clinical and treatment-related information, equity dimensions based on the PROGRESS-Plus framework, prevalence estimates, and reported associations.

**Results.** Of 1,606 records assessed, six studies were included. Among patients with breast or colorectal cancer, the likelihood of loneliness was higher in those without a partner (OR = 2.69, 95% CI 1.54–4.69), with persistent fatigue (OR = 2.83, 95% CI 1.46–5.50), persistent cognitive impairment (OR = 3.09, 95% CI 1.41–6.76), or newly diagnosed cognitive impairment (OR = 2.78, 95% CI 1.35–5.72). Among patients with digestive system cancer, disease stage ($p = 0.001$), disease duration ($p = 0.022$), and awareness of the disease ($p = 0.001$) were associated with loneliness. Evidence concerning social isolation was limited; however, social isolation was identified as an independent predictor of mortality among patients with gastrointestinal, breast, genitourinary, or lung cancer (HR = 1.12, 95% CI 1.07–1.17; $p < 0.001$) and was associated with subclinical or clinical anxiety and depression (both $p < 0.001$). No data were identified regarding associations between loneliness or social isolation and cancer treatment. Loneliness and social isolation were positively correlated among patients with breast or

prostate cancer ($r = 0.45$; $p < 0.05$). Equity-related predictors of loneliness included family ties, living arrangements, socioeconomic status, and sex, whereas social isolation was associated with sex and income.

**Discussion.** The limited evidence and substantial clinical and methodological heterogeneity prevented meaningful comparison of loneliness and social isolation prevalence across cancer types. Nevertheless, the findings support incorporating the systematic assessment of these conditions into care models for older adults with cancer. Addressing the underlying inequities may help reduce their health burden. Because of their competencies and close contact with patients, nurses are well positioned to identify these vulnerabilities at an early stage.

**Keywords**: Oncology Nursing, Loneliness, Social Isolation, Older Adults, Health Equity



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## Abstract

# Infusion Safety in Oncology: Protocol for a Multicenter Study of Air-in-Line Alarms During Antineoplastic Drug Administration

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**Introduction.** Intravenous antineoplastic therapy is a highly complex process in which apparently technical issues may affect treatment continuity, healthcare professionals' workload, and the overall safety of the care pathway. Air-in-line alarms represent a significant concern, particularly during the administration of foaming drugs because of their greater tendency to generate microbubbles within infusion lines. Despite the clinical and nursing relevance of this phenomenon, evidence concerning alarm frequency and independent comparisons of different infusion technologies remains limited.

This study aims to investigate the factors associated with the occurrence and management of air-in-line alarms during antineoplastic drug administration.

**Methods.** A multicenter, observational, prospective, multiphase, and multimethod study protocol was developed involving five Italian centers. The study comprises three complementary phases: a preclinical simulation phase using a manikin to compare infusion technologies under controlled conditions; a field-based observational phase using the Entrustable Professional Activities framework to identify the competencies required for the safe management of infusion therapy and related alarms; and a prospective multicenter observational phase assessing alarm frequency and type, management time, operational strategies, and healthcare professionals' user experience. The study was approved by the National Ethics Committee of the Italian National Institute of Health and was registered on ClinicalTrials.gov as AIR-ONC (NCT07718711).

**Results.** As this is a study protocol, no empirical results are currently available. The planned analyses will integrate simulation, observational, and real-world data to identify the technological, clinical, and organizational factors associated with air-in-line alarms, compare different infusion technologies, and describe the operational impact of these alarms on clinical practice.

**Discussion.** This protocol addresses a relevant problem in everyday oncology practice through an approach integrating infusion technology, nursing competencies, and usability considerations. The findings may support the development of evidence-based recommendations, targeted educational interventions, and organizational strategies aimed at improving patient safety, treatment continuity, and the quality of oncology nursing care.

**Keywords**: Oncology Nursing, Infusion Safety, Antineoplastic Drugs, Air-in-Line Alarms, Infusion Technology, Patient Safety



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## Abstract

# From Volume to Value: The Strategic Role of People Management in the Value Health System

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**Introduction**. The Italian National Health Service is facing two closely connected challenges: the growing shortage of healthcare professionals and the financial sustainability of the system. Difficulties in recruiting and retaining personnel are affecting service delivery, while several Regions struggle to maintain balanced budgets or provide adequate levels of care. Cost-containment policies have primarily focused on controlling consumption and reducing procurement prices, particularly for pharmaceuticals and medical devices. However, the actual use of resources for individual clinical cases and within operational processes remains insufficiently understood. This conceptual contribution examines how granular process knowledge and strategic people management can support the transition from a volume-oriented system to a value-oriented health system.

**Methods.** A conceptual health-policy and organizational analysis was undertaken, considering existing expenditure-control mechanisms and the macro-level monitoring activities performed by the Court of Auditors, the Ministry of Health, and Agenas. The analysis explored the relationships among workforce shortages, financial sustainability, internal process knowledge, resource allocation, and public value creation.

**Results.** Existing control mechanisms enable the monitoring of aggregate expenditure and financial balance but provide limited insight into resource utilization and internal processes at the individual clinical-case level. This creates a substantial gap between perceived and actual costs and organizational inefficiencies. A value-oriented system requires a granular understanding of operational processes, much of which resides with healthcare professionals. Collaboration between economic-managerial and clinical-organizational expertise can support the identification of inefficiencies and the more effective reallocation of resources. Nurses and other healthcare professionals consequently assume a strategic role not only as care providers but also as contributors to process governance and public value generation.

**Discussion.** Strategic people management can enable a structural transition from indiscriminate cost reduction to the qualification of healthcare expenditure. Involving healthcare professionals in process analysis, organizational decision-making, and resource allocation can improve efficiency while maximizing the impact of available resources on population health. Recognizing nurses and other healthcare professionals as active participants in value creation is therefore essential for the sustainability and organizational resilience of the Italian National Health Service.

**Keywords:** Value Health System, Healthcare Costs, Efficiency, Resource Allocation, People Management



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## Abstract

# Relationship Between Self-Care and Quality of Life in People Receiving Oral Anticancer Agents: A Single-Center Analysis Within a National Multicenter Study

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**Introduction**. The Italian National Health Service is facing two closely connected challenges: the growing shortage of healthcare professionals and the financial sustainability of the system. Difficulties in recruiting and retaining personnel are affecting service delivery, while several Regions struggle to maintain balanced budgets or provide adequate levels of care. Cost-containment policies have primarily focused on controlling consumption and reducing procurement prices, particularly for pharmaceuticals and medical devices. However, the actual use of resources for individual clinical cases and within operational processes remains insufficiently understood. This conceptual contribution examines how granular process knowledge and strategic people management can support the transition from a volume-oriented system to a value-oriented health system.

**Methods.** A conceptual health-policy and organizational analysis was undertaken, considering existing expenditure-control mechanisms and the macro-level monitoring activities performed by the Court of Auditors, the Ministry of Health, and Agenas. The analysis explored the relationships among workforce shortages, financial sustainability, internal process knowledge, resource allocation, and public value creation.

**Results.** Existing control mechanisms enable the monitoring of aggregate expenditure and financial balance but provide limited insight into resource utilization and internal processes at the individual clinical-case level. This creates a substantial gap between perceived and actual costs and organizational inefficiencies. A value-oriented system requires a granular understanding of operational processes, much of which resides with healthcare professionals. Collaboration between economic-managerial

and clinical-organizational expertise can support the identification of inefficiencies and the more effective reallocation of resources. Nurses and other healthcare professionals consequently assume a strategic role not only as care providers but also as contributors to process governance and public value generation.

**Discussion.** Strategic people management can enable a structural transition from indiscriminate cost reduction to the qualification of healthcare expenditure. Involving healthcare professionals in process analysis, organizational decision-making, and resource allocation can improve efficiency while maximizing the impact of available resources on population health. Recognizing nurses and other healthcare professionals as active participants in value creation is therefore essential for the sustainability and organizational resilience of the Italian National Health Service.

**Keywords**: Self-Care, Quality of Life, Oral Anticancer Agents, Oncology Nursing, Symptom Management, Therapeutic Education



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## Abstract

# Nursing Leadership and Research Infrastructure in a University Hospital Setting: An Updated 2019-2025 Analysis of the DAIRI-AOU AL Model

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**Introduction**. The increasing complexity of healthcare systems requires integrated models combining clinical practice, research, and innovation. Nursing leadership is essential for promoting evidence-based practice and generating value for patients, healthcare professionals, and organizations. This study aimed to describe and critically evaluate the organizational model and activities of the Health Professions Research Unit within DAIRI, highlighting its role in strengthening research capacity and promoting innovation in clinical practice.

**Methods.** A descriptive organizational analysis of a hospital-wide research network was conducted. The model comprises a Director of Health Professions Research, three organization-level research coordinators, and three area-based coordinators covering rehabilitation, medical-surgical, and technical areas. These roles are divided equally between the Research Unit and clinical settings to ensure operational integration. The network is complemented by research nurses and study nurses working across hospital departments and supporting protocol development, study implementation, and data collection. Organizational activities and scientific outputs produced between 2019 and 2025 were analyzed.

**Results.** The Health Professions Research Unit implemented a structured, multilevel research network. Approximately 150 studies were conducted across cardiorespiratory, neurological, oncological, and self-care research areas. The network supported protocol development, study management, and data monitoring. Between 2019 and 2025, scientific productivity increased and national and international collaborations expanded, facilitating multicenter studies and knowledge translation activities with organizational impact.

**Discussion.** This experience suggests that structured research networks, nursing leadership, and dedicated organizational infrastructures can strengthen research capacity and facilitate knowledge translation into clinical practice. The DAIRI-AOU AL model may represent a scalable and sustainable framework for supporting health professions research in other healthcare organizations.

**Keywords:** Nursing Leadership, Nursing Research, Evidence-Based Practice, Organizational Innovation, Health Professions, Research Infrastructure



**Funding:** This research received no external funding. **Conflict of Interest:** Tatiana Bolgeo serves as Director of the Health Professions Research Unit, Antonio Maconi serves as Director of DAIRI, and Roberta Di Matteo and Menada Gardalini work within DAIRI at AOU AL, the organizational structure described and evaluated in this study. The authors declare no other conflicts of interest.

## Abstract

# Care Coordination for Patients With Cancer: The Role of the Oncology Nurse Navigator - A Narrative Review

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**Introduction.** Cancer care pathways are complex and frequently fragmented, involving multiple healthcare professionals and care settings throughout diagnosis, treatment, and follow-up. Combined with the emotional and social burden of cancer, this complexity may lead to patient disorientation, discontinuity of care, and poor treatment adherence. The Oncology Nurse Navigator (ONN) has clinical, educational, and coordination competencies that may facilitate care integration and support patients throughout the disease trajectory. This review aimed to analyze the role of the ONN in reducing care fragmentation, improving patient satisfaction, and enhancing treatment adherence.

**Methods.** A narrative literature review was conducted in October 2025 using the PubMed and Scopus databases. No filters or restrictions were applied. Articles were screened by title, abstract, and full text according to predefined inclusion and exclusion criteria.

**Results.** A total of 739 records were identified, comprising 441 records from PubMed and 298 from Scopus. Following the selection process, nine studies were included in the review. Most studies reported that nurse navigator-led interventions were associated with more timely care, improved coordination across healthcare services, and greater patient satisfaction.

**Discussion.** The Oncology Nurse Navigator may represent a strategic component of integrated, patient-centered cancer care models. Further studies are needed to define the competencies and areas of intervention associated with this role, identify measurable outcomes, assess its effects on treatment adherence, and evaluate its implementation within the Italian National Health Service.

**Keywords:** Cancer Patients, Oncology Nurse Navigator, Continuity of Patient Care, Patient Satisfaction, Integrated Care



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# Abstract

# The Nurse Case Manager in the Simultaneous Care Multidisciplinary Oncology Group: Never Alone Again

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**Introduction.** Introduction: Simultaneous care integrates palliative care with active treatment from the early stages of illness. Disease-related burden, complex appointment management, and fragmented hospital organization may generate helplessness, vulnerability, loneliness, and disorientation among patients, families, and caregivers. Within the simultaneous care multidisciplinary oncology group, the nurse case manager facilitates access to services and diagnostic examinations, integrates the pathway agreed upon with patients and specialists, plans nursing care according to the Gordon-NANDA-I-NOC-NIC model, and promotes continuity between hospital and community services. This project aimed to evaluate the contribution of the nurse case manager to simultaneous care pathways, particularly in improving quality of life through timely symptom management at home and reducing emergency medical service calls, emergency department visits, and repeated hospitalizations.

**Methods.** The project combined a review of national and international literature on case management models in oncology and palliative care with a descriptive analysis of clinical cases managed during the first six months of implementation. The analysis considered adherence to medical and surgical treatments, waiting times for examinations and specialist visits, professional integration between hospital and community services, and patient- and family-perceived quality of care.

**Results.** The introduction of the nurse case manager was associated with reduced fragmentation of hospital services, improved coordination among healthcare professionals, and more timely activation of home care. The model also supported greater integration between hospital and community services throughout the care pathway.

**Discussion.** The nurse case manager may act as a facilitator by integrating clinical, organizational, and relational competencies. Personalized care requires respect for patients' preferences and availability, shared decision-making concerning quality and quantity of life, and progressive listening throughout the disease trajectory. Quantitative evaluation is required to determine the model's effects on healthcare utilization, treatment adherence, symptom management, and perceived quality of care.

**Keywords**: Case Management, Simultaneous Care, Continuity of Patient Care, Palliative Care, Oncology Nursing



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## Abstract

# Transcultural Nursing in Oncology During Ramadan: A Case Report Using Leininger's Sunrise Enabler to Support Oral Premedication Adherence

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**Introduction**. During Ramadan, Muslim patients fast from dawn to sunset. For people with complex conditions or continuous treatment, fasting may create specific clinical needs. In oncology, patients may continue fasting without informing the healthcare team, while oral medication may be perceived as invalidating the fast. Reconciling therapeutic adherence, spiritual identity, and clinical safety may therefore be challenging. This case report aimed to describe transcultural nursing care provided to a Muslim patient attending an oncology day hospital during Ramadan, using Leininger's Sunrise Enabler.

**Methods.** This case report concerns a 52-year-old Bangladeshi Muslim man with lung adenocarcinoma receiving amivantamab. During a scheduled oncology day hospital visit in Ramadan, he declined the prescribed oral premedication because he feared it would invalidate his fast. Assessment identified religious and spiritual beliefs as priority care factors. Interventions comprised cultural care preservation and maintenance, respecting the spiritual value of sawm; accommodation and negotiation, through education about rukhsa and the involvement of an imam; and repatterning and restructuring, through discussion of fidya as a possible religious accommodation. The patient subsequently accepted the oral premedication, allowing treatment to proceed without delay.

**Results.** Following the transcultural consultation, the patient demonstrated an understanding of the religious options discussed with the imam and accepted the oral premedication. Amivantamab treatment was administered as scheduled, without postponement or interruption. At subsequent visits, the patient showed greater willingness to discuss religiously related care needs proactively with the healthcare team.

**Discussion.** Use of the Sunrise Enabler supported dialogue between religious practice and therapeutic safety. The integration of transcultural assessment, intercultural mediation, and religious support facilitated informed adherence while respecting the patient's values. This case supports strengthening transcultural competencies among oncology nurses and developing locally adaptable pathways for discussing fasting and medication during Ramadan.

**Keywords:** Transcultural Nursing, Ramadan, Oncology Nursing, Sunrise Enabler, Cultural Competence, Oral Premedication



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Quality of Life, Fatigue Syndrome, and Pain in Patients With Progressive or Recurrent Bone and Soft Tissue Sarcomas: An Observational Study

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**Introduction**. Malignant bone and soft tissue tumors are rare and aggressive diseases. Evidence concerning patient-reported outcomes remains limited, particularly among patients with recurrent or progressive disease. This study aimed to characterize trajectories of quality of life, cancer-related fatigue, and pain over 24 months and to examine their associations with age and tumor type.

**Methods.** This prospective observational study enrolled patients with confirmed disease recurrence or progression between July 2019 and April 2021. Quality of life was assessed using the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30, fatigue using the Brief Fatigue Inventory, and pain using the Numeric Rating Scale. Assessments were conducted at baseline and after 6, 12, and 24 months. Temporal trends and associations with age and tumor type were analyzed using linear mixed-effects models. The study was approved by the Ethics Committee of Area Vasta Emilia Centro and registered at ClinicalTrials.gov (NCT04104750).

**Results.** Forty-two patients were included (mean age: 41.3 ± 15.5 years; 45.2% women). Baseline characteristics did not differ significantly across tumor types. Pain and fatigue improved significantly over time, whereas global quality of life declined at 12 and 24 months. Functional and symptom-related quality-of-life scores remained stable. Older age was associated with less favorable pain and quality-of-life trajectories, while tumor type was not significantly associated with the outcomes.

**Discussion.** Patients with recurrent or progressive sarcomas experience a substantial symptom burden irrespective of tumor type. Although pain and fatigue improved over time, the decline in global quality of life highlights the importance of age-sensitive supportive interventions. These findings may inform personalized supportive and palliative care pathways, including regional home-based care networks.

**Keywords**: Sarcoma, Quality of Life, Cancer-Related Fatigue, Pain, Palliative Care

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Retrospective Analysis of the Real-World Implementation of Remote Patient Monitoring at the European Institute of Oncology: The LUMINIS Study

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**Introduction.** Remote symptom monitoring can support the timely identification and management of treatment-related symptoms in people with cancer. Although clinical guidance supports its integration into oncology care, evidence concerning large-scale implementation in routine clinical practice remains limited. Following the introduction of the Cureety platform at the European Institute of Oncology in Milan in 2023, the LUMINIS study aimed to describe its real-world implementation over approximately two years.

**Methods.** A retrospective analysis was conducted of patients enrolled in Cureety at the European Institute of Oncology between 1 July 2023 and 31 March 2025. Cureety is a CE-marked digital medical device through which patients complete cancer- and treatment-specific symptom questionnaires based on the Common Terminology Criteria for Adverse Events framework. The TechCare algorithm assigns one of four clinical classifications: Correct (green), Compromised (yellow), To Monitor (orange), or Critical (red). Orange and red classifications generate alerts requiring action by patients or healthcare professionals. Implementation volume, patient characteristics, reported adverse events, treatment types, and satisfaction were analyzed.

**Results.** A total of 1,016 patients were enrolled: 682 (67.1%) were women and 334 (32.9%) were men, with a mean age of 62 years. Breast cancer was the most common diagnosis (32.3%), followed by lung (16.2%), prostate (15.9%), gynecological (13.4%), skin (7.7%), and gastrointestinal cancers (5.4%). Treatments included chemotherapy (27.6%), targeted therapy (21.9%), immunotherapy (12.0%), hormonal therapy (6.1%), antibody–drug conjugates (4.1%), and combined treatments (23.7%).

Patients completed 12,691 questionnaires and reported 39,258 adverse events of grade ≥1. Among respondents to the satisfaction questionnaire, 43.1% were very satisfied, 44.4% satisfied, 11.6% moderately satisfied, and 0.9% not satisfied. The number of active patients increased from 91 in the first quarter of 2024 to 669 in the first quarter of 2025.

**Discussion.** The increase in active users and the high proportion of positive satisfaction ratings suggest that large-scale digital remote symptom monitoring was feasible and acceptable in this oncology setting. These descriptive findings do not establish clinical effectiveness or improvements in patient safety. Further studies should evaluate alert management, healthcare utilization, clinical outcomes, equity of access, and sustained patient engagement.

**Keywords**: Patient-Reported Outcomes, Digital Health, Patient Empowerment, Remote Patient Monitoring, Self-Management



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## Abstract

# Adherence to Oral Molecularly Targeted Therapy in Metastatic Renal Cell Carcinoma: A Qualitative Study

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**Citation:** Molinaro, S., Gambalunga, F., Bolgeo, T., Marzo, C., Spano, A., Petrone, F., & Iacorossi, L. (2026). Adherence to oral molecularly targeted therapy in metastatic renal cell carcinoma: A qualitative study. *International Journal of Health Supplements*, 1(Suppl. 2), 262–263. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Adherence to oral therapy is a major challenge in oncology, particularly for patients with metastatic renal cell carcinoma receiving molecularly targeted treatments at home. Regular medication intake, independent management of adverse effects, and integration of treatment into everyday life make adherence an important determinant of clinical outcomes. This study aimed to explore patients' experiences of adherence to oral therapy and identify factors that facilitate or hinder treatment continuity.

**Methods.** A single-centre qualitative study with a descriptive–inductive approach was conducted and reported with reference to the COREQ checklist. Adult patients receiving oral molecularly targeted therapy were recruited from the Oncology Day Hospital of the Regina Elena National Cancer Institute in Rome. Data were collected through semi-structured interviews and examined using Ritchie and Spencer's Framework Analysis to identify recurrent themes and interpretative patterns.

**Results.** Thirty-one patients, predominantly men, were included, with a mean age of 69.3 years. Six principal themes emerged: barriers to adherence; obstacles related to adverse effects, forgetfulness, and disruption of daily routines; facilitators, including family support, trust in healthcare professionals, and perceived treatment benefits; the emotional impact of adherence; the perceived relationship between adherence and quality of life; and the role of awareness and attentiveness in treatment management.

**Discussion.** Adherence to oral therapy emerged as a dynamic and multidimensional process influenced by cognitive, emotional, and relational factors. The transition towards home-based treatments requires a patient-centred care model integrating effective communication, proactive toxicity management, therapeutic education, and empathic support. Personalized, multidisciplinary strategies may strengthen patient empowerment, therapeutic alliance, and continuity of treatment.

**Keywords:** Medication Adherence, Antineoplastic Agents, Kidney Neoplasms, Oral Administration, Qualitative Research



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## Abstract

# Mastectomy, Body Image Disturbance, and Nursing Strategies: A Narrative Review

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**Citation:** Luongo, D., Chizzoli, G., Depalma, L., Gasparini, S. M., & Pancheri, M. L. (2026). Mastectomy, body image disturbance, and nursing strategies: A narrative review. *International Journal of Health Supplements*, 1(Suppl. 2), 264. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Breast cancer represents a major global oncological challenge. Mastectomy can profoundly affect body image, identity, psychosocial well-being, and quality of life. Oncology nurses may facilitate adaptation through educational, psychosocial, and rehabilitative interventions. This review aimed to identify nursing strategies that may reduce body image disturbance following mastectomy and support women's adaptation.

**Methods.** A narrative literature review was conducted. MEDLINE, Embase, Emcare, PsycINFO, and Scopus were searched using predefined eligibility criteria. Two reviewers independently screened the records using Rayyan. PRISMA informed the reporting process, while the SANRA checklist was used as a methodological reference.

**Results.** Of the 218 records identified, seven studies were included: four randomized controlled trials, two phenomenological qualitative studies, and one quasi-experimental study. Nurses delivered interventions independently or within multidisciplinary teams, both before and after mastectomy. The reported strategies included patient education, peer-group dialogue, individualized support, and coaching-based interventions, including the Mirror Program, intended to promote self-confidence, self-esteem, and emotional well-being.

**Discussion.** Nursing strategies may support women in adapting to changes in body image following mastectomy, particularly through educational and psychosocial interventions. However, the small and heterogeneous evidence base limits the strength and generalizability of the conclusions. Further research should identify interventions tailored to different age groups and evaluate the potential contribution of caregivers.

**Keywords:** Body Image, Mastectomy, Oncology Nursing, Patient Education, Psychosocial Support



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

# Abstract

# Nursing Care Quality in Oncology: A Scoping Review

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**Citation:** Riboni, F., Bozzetti, M., Poliani, A., Rosa, D., Villa, G., Manara, D. F., & Marcomini, I. (2026). Nursing care quality in oncology: A scoping review. *International Journal of Health Supplements*, 1(Suppl. 2), 265. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. Nursing care quality is a complex and multidimensional concept for which no universally accepted definition exists. Its interpretation may also differ between patients and nurses. In oncology, this complexity is amplified by the emotional, relational, and clinical demands of the care pathway. This review aimed to map and synthesize the literature on nursing care quality in oncology, identifying its principal dimensions, associated factors, outcomes, and conceptual evolution.

**Methods.** A scoping review was conducted according to the Joanna Briggs Institute methodology and reported in accordance with PRISMA-ScR. MEDLINE, CINAHL, Scopus, and Web of Science were searched for articles published in English or Italian. Grey literature was excluded. Data were synthesized narratively and examined through exploratory text analysis.

**Results.** Twenty-nine studies were included. Four principal themes emerged: Caring, Patient Experience, Quality of Nursing Care, and Measurement and Evaluation. Associated factors were grouped into three categories: patients' clinical and demographic characteristics, care-related and relational aspects, and organizational factors. Nursing care quality was associated with satisfaction and trust, psychological well-being, clinical outcomes, and quality of life.

**Discussion.** Nursing care quality in oncology has evolved from a predominantly humanistic perspective towards a multidimensional construct integrating relational, experiential, organizational, and evaluative components. Combining person-centred relationships with standardized assessment approaches may support evidence-based nursing practice and a more comprehensive evaluation of care quality.

**Keywords:** Nursing Care, Oncology Nursing, Quality of Health Care, Scoping Review



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## Abstract

# Nursing Care Intensity in Clinical Research: A Retrospective Time Analysis of Nursing Activities for Patients Enrolled in Clinical Trials

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**Introduction**. Clinical trials add protocol-driven activities to routine oncology care, increasing nursing workload in ways not captured by conventional staffing models. This study quantified the additional nursing time associated with non-standard-of-care procedures for patients receiving parenteral investigational treatments.

**Methods.** This retrospective time analysis included patients enrolled in clinical trials at a single oncology centre between 2018 and March 2026. Eligible patients received intravenous or subcutaneous investigational products. Protocol schedules of activities were reviewed to identify non-standard-of-care pharmacokinetic (PK) sampling, vital-sign monitoring, and electrocardiograms (ECGs). Institutional benchmark times were applied: 15 minutes per PK sample, 10 minutes per vital-sign assessment, and 15 minutes per ECG.

**Results.** Seventy-six patients from 20 trials were evaluated; phase II and phase III accounted for 7% and 93%, respectively, while 76% received treatment in an experimental arm. Treatment categories were combination therapy (53%), immunotherapy (34%), and antibody–drug conjugates (12%); the median number of treatment cycles was 14 (range, 1–128). PK sampling was required in 50% of patients and multiple post-dose sampling in 8%, with a median estimated nursing time of 182 minutes (range, 45–645). Baseline and post-dose ECGs were required in 15% and 3%, respectively; median ECG time was 85 minutes (range, 15–390). Vital-sign monitoring was required in 20%, with a median of 153 minutes (range, 30–670). Overall, non-standard-of-care procedures required a mean of 267 minutes per patient (range, 75–985).

**Discussion.** Protocol-driven nursing workload is substantial and variable but may be overlooked by staffing models focused on clinical complexity. Incorporating research-related activities into workload measurement could support realistic resource allocation and maintain data quality.

**Keywords**: Nursing, Clinical Research, Clinical Trials

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Development and Initial Psychometric Validation of the Self-Care of Cancer Inventory (SC-CI)

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**Citation:** Amato, C., Iovino, P., Magi, C. E., El Aoufy, K., Longobucco, Y., Di Stefano, L., Vellone, E., Di Nitto, M., & Rasero, L. (2026). Development and initial psychometric validation of the Self-Care of Cancer Inventory (SC-CI). *International Journal of Health Supplements*, 1(Suppl. 2), 268–269. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Cancer is increasingly managed as a chronic condition, requiring patients to undertake complex self-care behaviours. Existing oncology instruments primarily assess specific symptoms or limited dimensions of self-care and may not provide a comprehensive, theory-based evaluation. This study developed the Self-Care of Cancer Inventory (SC-CI) and evaluated its initial psychometric properties.

**Methods.** A psychometric validation study was conducted using baseline data from the ONCO-SHIELD longitudinal study at Careggi University Hospital, Florence. Adults with metastatic solid tumours receiving first-line systemic anticancer therapy were enrolled. The SC-CI was developed through a theory-driven process based on the Middle-Range Theory of Self-Care of Chronic Illness, including item generation, expert content validation, and cognitive interviews. Structural validity was assessed using confirmatory factor analysis (CFA), and internal consistency using McDonald's omega (ω).

**Results.** The study included 305 patients (mean age, 68.4 years; standard deviation, 9.53), of whom 68.2% were men. The most represented cancers were lung (28.2%), lower gastrointestinal (23.3%), and genitourinary cancers (22.0%). Content validity was high across domains (S-CVI, 0.97–0.98), and cognitive interviews supported the relevance, comprehensibility, and comprehensiveness of the items. CFA supported the multidimensional structure after minor model refinements, including removal of two self-care maintenance items and specification of theoretically justified residual covariances. The simultaneous CFA showed acceptable fit (RMSEA = 0.050; CFI = 0.925; TLI = 0.919; SRMR = 0.080). Internal consistency was adequate to good across domains (ω = 0.74–0.85).

**Discussion.** The SC-CI is a promising multidimensional, theory-based instrument for assessing self-care in oncology. Further studies should examine convergent and known-groups validity, confirm the refined factor structure in an independent sample, and test its performance in broader and more

diverse oncology populations.

**Keywords**: Self-Care, Oncology Nursing, Psychometrics



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

# Abstract

# E-Health Literacy and Immersive Digital Platforms in Haematological Cancer Care: The MetaCare Project

**Valentina Zoboli[1], Manuel Gotti[1], Federica Olivazzi[2]**

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**Citation:** Zoboli, V., Gotti, M., & Olivazzi, F. (2026). E-health literacy and immersive digital platforms in haematological cancer care: The MetaCare project. *International Journal of Health Supplements,* 1(Suppl. 2), 270–271. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. Haematological malignancies impose a substantial clinical and psychosocial burden, with unmet informational and educational needs that may affect treatment adherence and quality of life. Digital health technologies may support disease management, but their effectiveness depends on patients' e-health literacy and integration within care pathways. This review examined e-health literacy among patients with haematological malignancies and informed the rationale and potential role of the MetaCare project.

**Methods.** A structured literature review covering 2010–2025 was conducted in PubMed, Scopus, and CINAHL using the Population–Concept–Context framework. Studies evaluating digital interventions for patients with haematological malignancies or their caregivers were eligible. The PRISMA-based selection process identified 1,490 records, of which seven studies involving 548 participants were included.

**Results.** The included studies reported improvements in patient empowerment of up to 67% and treatment adherence of up to 42%, alongside enhanced informational support, psychological well-being, and communication with healthcare professionals. Persistent barriers included the digital divide, variability in e-health literacy, and limited integration of digital interventions into clinical workflows.

**Discussion.** MetaCare is conceived as an immersive, modular digital ecosystem combining therapeutic education, symptom self-management, and psychosocial support. It is designed to strengthen e-health literacy and reduce informational gaps while supporting nurses' roles in digital education and remote monitoring. Its clinical and organisational effects have not yet been evaluated; future studies should assess patient-reported outcomes, adherence, symptom management, unplanned healthcare use, accessibility, and implementation within routine care.

**Keywords:** E-Health Literacy, Haematological Malignancies, Digital Health, Patient Empowerment, Caregivers, Nursing Innovation

**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Determinants of Perceived Social Support in Patients Receiving Oral Anticancer Therapy: A Cross-Sectional Study

**Federica Lacarbonata[1], Silvia Ucciero[2], Angela Durante[3], Tatiana Bolgeo[4], Vincenzo Damico[5], Greta Ghizzardi[6], Sipontina Rita Zerulo[7], Rosaria Alvaro[8], Francesco Torino[9], Ercole Vellone[8], Marco Di Nitto[10]**

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**Introduction.** Perceived social support plays a central role in the experience of patients with cancer, particularly those receiving oral anticancer therapy, which is largely self-managed at home with limited clinical supervision. Social support may help patients manage treatment-related symptoms and medication adherence while promoting psychological well-being and treatment safety. This study aimed to identify factors associated with perceived social support in adults receiving oral anticancer therapy.

**Methods.** A cross-sectional study was conducted among adults aged ≥18 years who had received oral anticancer therapy for at least three months. Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support. Depressive symptoms were measured using the Patient Health Questionnaire-9, patient–caregiver mutuality using the Mutuality Scale, and patient-centredness using the Revised Patient Perception of Patient-Centeredness questionnaire. Socioeconomic and clinical variables were also examined. Hypothesis-driven linear regression models were estimated using JASP.

**Results.** A total of 528 patients were included. The median age was 59 years (interquartile range [IQR], 51–71), 50.8% were women, and the median perceived social support score was 4.58 (IQR, 3.67–5.42). Greater depressive symptoms (B = −0.051, p < .001), male sex (B = −0.542, p < .001), and living alone (B = −0.347, p = .030) were associated with lower perceived social support. Greater mutuality (B = 0.368, p < .001), better patient-centred care (B = 0.121, p = .032), having more than one caregiver (B = 0.620, p < .001), and selected socioeconomic and clinical characteristics were associated with higher perceived social support. The model explained 32% of the variance (adjusted $R^2$ = .32).

**Discussion.** Perceived social support among patients receiving oral anticancer therapy appears to be influenced primarily by psychological and relational factors. Routine nursing assessment should therefore encompass emotional distress, living arrangements, social resources, and the quality of patient–caregiver relationships. Longitudinal studies are needed to clarify the direction and clinical implications of these associations.

**Keywords**: Perceived Social Support, Oral Anticancer Therapy, Medication Adherence, Patient-Centred Care, Depression



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Type 3c Diabetes Mellitus in Adults: Oncologic Implications From a Scoping Review

**Manuela Saurini[1], Ilaria Milani[2], Caterina Galletti[3], Francesco Stanzione[4], Beniamino Schiavone[5], Cesare Berra[6], Rosario Caruso[7], Gennaro Rocco[8,9], Maddalena De Maria[3]**

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**Citation:** Saurini, M., Milani, I., Galletti, C., Stanzione, F., Schiavone, B., Berra, C., Caruso, R., Rocco, G., & De Maria, M. (2026). Type 3c diabetes mellitus in adults: Oncologic implications from a scoping review. *International Journal of Health Supplements,* 1(Suppl. 2), 274–275. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction**. New-onset diabetes in adults may represent an early manifestation of pancreatic cancer. Type 3c diabetes mellitus, which develops secondary to diseases of the exocrine pancreas, remains under-recognized and is frequently misclassified as type 2 diabetes. This diagnostic challenge may delay the identification of underlying pancreatic disease. This review aimed to map the available evidence on type 3c diabetes in adults across its principal clinical domains, with particular attention to oncologic implications.

**Methods.** A scoping review was conducted according to Joanna Briggs Institute methodology and reported following the PRISMA Extension for Scoping Reviews. PubMed/MEDLINE, Embase, CINAHL, Scopus, Web of Science, and PsycINFO were searched from inception to August 2025. Ninety-six eligible studies were included. The review protocol was deposited on Figshare.

**Results.** Pancreatic structural disease and cancer emerged as clinically relevant contexts for type 3c diabetes. Adults presenting with new-onset diabetes and unintended weight loss were consistently described as a high-risk group warranting diagnostic evaluation for pancreatic neoplasia. Post-pancreatectomy diabetes represented a distinct etiological pathway, with total pancreatectomy requiring lifelong insulin replacement and being associated with greater healthcare use. Pancreatic cancer was among the leading reported causes of death, while overall mortality was higher than in other diabetes types, particularly among individuals with advanced structural pancreatic disease. Some observational studies suggested a potentially protective association between metformin use and pancreatic carcinogenesis; however, the available evidence did not establish causality.

**Discussion.** Evidence concerning the oncologic implications of type 3c diabetes remains

predominantly descriptive and does not yet support standardized surveillance or pancreatic cancer screening pathways. Priorities include developing validated diagnostic algorithms combining metabolic and imaging parameters, improving the identification of high-risk patients with new-onset diabetes, and conducting prospective studies evaluating cancer-related outcomes in this population.

**Keywords**: Type 3c Diabetes, Pancreatogenic Diabetes, Chronic Pancreatitis, Exocrine Pancreatic Insufficiency, Glycaemic Variability, Scoping Review



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Holistic Nursing in Oncology Care: Implementation and Preliminary Outcomes of a District Caring Massage and Reiki Clinic

**Sonia Buselli[1], Silvia Gorini[1], Azzurra Macinai[1], Gianna Ghini[1], Annalisa Pennetti[1], Meri Garuglieri[1], Silvia Mancuso[1], Paola Marrocchesi[1], Simona Bartalesi[1], Anna Carbonai[1], Beatrice Pisani[1]**

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*(Corresponding Author: sonia.buselli@uslsudest.toscana.it)*

**Citation:** Buselli, S., Gorini, S., Macinai, A., Ghini, G., Pennetti, A., Garuglieri, M., Mancuso, S., Marrocchesi, P., Bartalesi, S., Carbonai, A., & Pisani, B. (2026). Holistic nursing in oncology care: Implementation and preliminary outcomes of a district Caring Massage and Reiki clinic. International Journal of Health Supplements, 1(Suppl. 2), 276–277. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** The support needs of patients with cancer and their caregivers extend beyond clinical treatment and encompass physical, emotional, relational, and psychosocial dimensions. At the end of 2024, a nurse-led clinic focused on holistic well-being was designed to address the needs of people affected by cancer or chronic disabling conditions and their caregivers. This service evaluation aimed to describe the implementation and initial outcomes of a district clinic providing Caring Massage and Reiki as complementary interventions.

**Methods.** A descriptive service evaluation was conducted during 2025 within a community healthcare district. The clinic offered free access through a multidisciplinary referral network involving nurse-led clinics, palliative care services, general practitioners, and oncology psychology. Symptom burden was monitored using the Edmonton Symptom Assessment System–Total Care (ESAS-TC), administered at the beginning, midpoint, and completion of each care pathway.

**Results.** The clinic enrolled 104 service users aged 20–80 years, of whom 80% were women. Participants included patients receiving active cancer treatment, cancer survivors, people receiving end-of-life care, individuals with rare diseases, and caregivers. Repeated ESAS-TC assessments indicated average reductions in the scores of reported symptoms, particularly pain, anxiety, and insomnia. Users also described the service as an opportunity to dedicate time to their own physical and emotional well-being.

**Discussion.** This preliminary experience supports the feasibility of integrating nurse-led complementary interventions into community care pathways. The clinic may provide an additional space for listening, symptom monitoring, and holistic support for patients and caregivers. Controlled studies with complete quantitative reporting are required to determine the specific contribution of these interventions to symptom burden and quality of life.

**Keywords:** Holistic Nursing, Complementary Therapies, Oncology Nursing, Caregivers, Symptom Assessment, ESAS-TC



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

## Abstract

# Evidence-Based Management of PICCs and Totally Implantable Venous Access Ports: The Experience of Santa Maria Hospital in Terni

**Andrea Pantalloni[1], Iacopo Iachettini[2], Cristina Proietti[2], Annarita Argenti[2], Alessandra Fioretti[2], Andrea Santi[3], Anna Ciuffetelli[2], Annalisa Guida[2], Valerio Di Nardo[1]**

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*(Corresponding Author: a.pantalloni@aospterni.it)*

**Citation:** Pantalloni, A., Iachettini, I., Proietti, C., Argenti, A., Fioretti, A., Santi, A., Ciuffetelli, A., Guida, A., & Di Nardo, V. (2026). Evidence-based management of PICCs and totally implantable venous access ports: The experience of Santa Maria Hospital in Terni. *International Journal of Health Supplements*, 1(Suppl. 2), 278–279. https://doi.org/10.82051/ijhs-2026-Suppl2

**Introduction.** Peripherally inserted central catheters and totally implantable venous access ports are widely used in oncology and require specific nursing competencies to minimize device-related complications. However, expertise in their management is often concentrated within oncology units, potentially affecting the safe use of these devices in other hospital settings. This initiative aimed to describe the implementation and initial evaluation of a hospital-wide training programme for vascular access device management.

**Methods.** A descriptive evaluation of an educational programme was conducted at Santa Maria Hospital in Terni. The blended course comprised four hours of classroom instruction and one hour of supervised workplace training. Faculty included oncology nurses and a vascular access nurse selected according to their professional experience. The programme awarded 7.5 continuing medical education credits. Learning was assessed through a multiple-choice test and a practical examination conducted in the Oncology Day Hospital. Satisfaction was evaluated using a five-point Likert scale.

**Results.** Two course editions were completed, involving 32 healthcare professionals. Regarding relevance, 13% of respondents assigned a score of 4 and 87% a score of 5. For educational quality, 6% assigned a score of 3, 20% a score of 4, and 74% a score of 5. Regarding usefulness, the corresponding percentages were 13%, 6%, and 81%.

**Discussion.** The high satisfaction ratings indicate that participants perceived the programme as relevant, useful, and of good quality. Training in vascular access management should be integrated into an organization-wide programme incorporating surveillance, clinical audits, care bundles, and checklists. Future evaluations should examine changes in knowledge, practical competence, skill retention, and device-related clinical outcomes. Additional course editions involving nurses, physicians, and midwives are planned.

**Keywords:** Peripherally Inserted Central Catheter, Totally Implantable Venous Access Port, Vascular Access, Nursing Education, Patient Safety, Evidence-Based Nursing



**Funding:** This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.

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— Responsabile, novembre 2023

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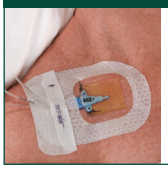
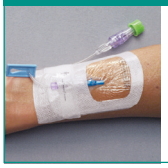
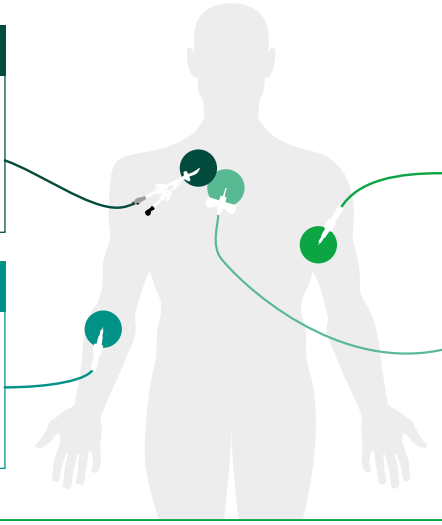


Utilizzati per cure intensive acute a breve termine, rimangono in genere in sede per giorni o settimane.

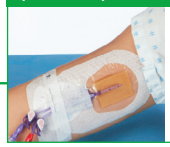
### Catetere venoso periferico (PIVC)



Utilizzato per brevi periodi, in genere rimane in sede per alcuni giorni.

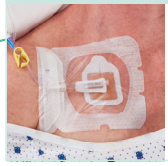


### Cateteri centrali inseriti per via periferica (PICC)



Utilizzati per trattamenti a lungo termine della durata di mesi.

### Port impiantati



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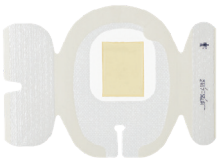

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